

Brief Biography

**Amir Faghri, Dean
& United Technologies Endowed Chair Professor
in Thermal-Fluids Engineering**

School of Engineering
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Dr. Faghri is currently Dean of the School of Engineering at the University of Connecticut. In this capacity, he is responsible for five engineering departments, five major research centers, and 10 Ph.D. and 12 undergraduate degree programs. During his tenure as Dean, he has dramatically expanded resources for faculty and student bases; built strong linkages with numerous constituents; and fostered research flexibility and excellence. In addition, Dr. Faghri successfully attracted corporate and alumni support to establish 17 endowed professorships, including 11 chair professorships; increased total enrollment by 106%; increased the number of valedictorians and salutatorians admitted per year to the School of Engineering from just seven to 45; increased the number of merit scholarships by 300%; and added three new buildings/facilities with more than 140,000 sq. ft. Dr. Faghri developed major initiatives and incentives to promote quality research and graduate education, including three new major research centers, with significant support from the state and federal governments, as well as the private sector.

While holding such academic and industrial positions as distinguished and chair professor, department head and Dean, Dr. Faghri authored seven books and editorial volumes, more than 260 archival technical publications, including 160 journal papers, and 11 U.S. patents. His newest text book, *Transport Phenomena in Multiphase Systems*, published by Elsevier. He has served as a consultant to several major research centers and corporations, including Los Alamos and Oak Ridge national laboratories, and Intel Corporation. As a principal investigator conducting research in heat and mass transfer, he has received numerous external research contracts from the National Science Foundation, National Aeronautics & Space Administration, Department of Defense, Department of Energy, and various industrial companies. Dr. Faghri's technical productivity is further complemented by his service on the editorial boards of eight scientific journals. Dr. Faghri has received many honors and awards, including the prestigious 1998 American Institute of Aeronautics & Astronautics (AIAA) Thermophysics Award, the 1998 American Society of Mechanical Engineering (ASME) Heat Transfer Memorial Award and the 2006 ASME James Harry Potter Gold Medal.

Dr. Faghri received his M.S. and Ph.D. degrees from the University of California at Berkeley (1974, 1976) and a B.S. with highest honors from Oregon State University (1973).

Curriculum Vitae

**Amir Faghri, Dean
School of Engineering
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University of Connecticut**

EDUCATION

Ph.D. 1976 Mechanical Engineering, University of California, Berkeley.
M.S. 1974 Mechanical Engineering, University of California, Berkeley.
B.S. 1973 Mechanical Engineering, Oregon State University, Corvallis (with highest honors).

ACADEMIC APPOINTMENTS

1998 – Present **Dean and Professor**, School of Engineering, University of Connecticut, Storrs, CT.
2004 – Present **Dean and United Technologies Endowed Chair Professor in Thermal-Fluids Engineering**, School of Engineering, University of Connecticut, Storrs, CT.
1994 – 1998 **Head and Professor**, Department of Mechanical Engineering, University of Connecticut, Storrs, CT.
1989 – 1993 **Brage Golding Distinguished Professor**, Wright State University, Dayton, OH.
1987 – 1994 **Professor**, Department of Mechanical and Materials Science Engineering, Wright State University, Dayton, OH.
1982 – 1987 **Associate Professor**, Department of Mechanical and Materials Engineering, Wright State University, Dayton, OH.
1981 - 1982 **Visiting Professor**, Department of Mechanical Engineering, University of California, Berkeley.

RESEARCH SUMMARY

- 6 books and editorial volumes
- 150 peer-reviewed journal publications
- 100 conference articles
- 11 U.S. patents
- 8 editorial positions in scientific journals
- Over \$12 million research grants and contracts as Principal Investigator
- 20 major keynote addresses and invited lectures
- 11 major honors and awards

TEACHING INTERESTS

Graduate and undergraduate courses in:

- Heat and mass transfer
- Transport phenomena
- Thermodynamics
- Transport phenomena in multiphase systems
- Fluid mechanics
- Boiling and condensation

RESEARCH INTERESTS

Experimental and computational methods in the following areas related to transport phenomena:

- Enhanced heat transfer in micro-technology.
- Heat and mass transfer analysis associated with heat pipe & fuel cell science and technology.
- Fundamental studies relating to interfacial phenomena and multiphase systems.
- Micro-scale heat and mass transfer.
- Heat and mass transfer with phase-change materials in energy technology and solid freeform fabrication.

Academic Administration

1998-present Dean, School of Engineering, University of Connecticut, Storrs, CT.

The School of Engineering at the University of Connecticut is Connecticut's largest, as well as the most comprehensive, public engineering program in New England, with over 1,600 undergraduate students and 600 graduate students enrolled in six engineering departments. The School of Engineering offers 12 baccalaureate and 10 graduate degree programs, and maintains more than 120 full-time faculty, of whom 43 are Fellows of leading professional societies and 35 hold prestigious editorial positions with top scientific journals. *U.S. News & World Report* named the University of Connecticut the number one public university in New England (1999-2005). The University of Connecticut was also one of only two public universities in New England accorded Carnegie Foundation Research I status under the previous ranking system.

Major School Initiatives

During his tenure as Dean, the School of Engineering has achieved the following milestones:

- **Significant External Funding** – Since the inception of the University's Capital Campaign initiative in 1998, the School of Engineering has pursued an aggressive campaign to secure external funding. Upon completion of Capital Campaign (June 2004) the School has raised \$157 million cash and in-kind gifts toward this campaign. The University's Capital Campaign for the entire university – including the schools of medicine, dentistry and law – targeted \$300 million for the period 1998-2004. The University raised more than \$471 million, of which the Engineering School's portion constitutes 30% of the total. The \$157 million sum represents 670% of the School of Engineering's original target sum.
- **Establishment of Named Endowed Professorships** – An aggressive fundraising plan was established in 1998, leading to 17 chaired and named endowed professorships:
 - Eleven endowed chairs - \$1 million each;
 - Six endowed professorships ranging from \$500,000 to \$750,000 each.
- **New Facilities & Major Renovations** – He has been actively involved in obtaining state and federal funds to significantly expand and improve the quality of Engineering facilities:
 - **Information Technologies Engineering Building** – A new, 100,000 sq. ft. facility completed in April 2003 housing research and teaching labs, conference rooms, faculty and support offices, classrooms, and a 350-seat auditorium. The Information Technologies Engineering building was constructed with \$32 million dollars from the state to house the Electrical & Computer Engineering and Computer Science & Engineering departments.

- **Connecticut Global Fuel Cell Center** – A new 16,000 sq. ft. facility constructed with support from the U.S. Department of Commerce Economic Development Administration was completed in November 2002. The facility focuses on research and development of fuel cell technology for government and commercial applications.
- **Booth Research Center Facility** - A new facility to support the School of Engineering computer support needs was completed in 2001. The facility comprises state-of-the-art computer facilities, networking hardware, research labs, support offices, and graduate student offices.
- **Renovation** - In addition to the above three new facilities, major renovations were executed in the four existing engineering buildings, including painting, carpeting, air conditioning, and installation of new furniture in 100 faculty/staff offices.
- **Connecticut Global Fuel Cell Center** – A major new research center was established in the School of Engineering in 2001 with focus on research and development of fuel cell science and technology. An \$18 million partnership with state, federal and private sector collaborators entails:
 - Six new chair professorships
 - 16,000 square foot new facility
 - Six million dollars in U.S. Congressional earmarks
- **Two Departments Merged** – As an outgrowth of the School of Engineering's Strategic Plan, the departments of Chemical Engineering and Materials Science & Engineering was merged to form a new Department of Chemical, Materials & Biomolecular Engineering effective July 1, 2006. Initiation and growth of a powerful and dynamic new department will advance the national and international prominence of two of our most important and valued programs, that because of their small size in terms of both faculty and students, did not receive the university, national or international recognition they deserved. An important component of the merged department will be a new, joint offering in Biomolecular Engineering. It is expected that top students will be excited by, and attracted to, new and relevant emerging areas of science and technology. The merger of these two departments is expected to dramatically increase the size, quality and diversity of undergraduate and graduate programs, and also significantly increase research opportunities in energy, biotechnology, nanotechnology and materials – overlapping research foci of current faculty in both departments. Six new faculty positions, including two chair endowed professorships, were created in this new department.
- **Center for Optics, Sensing and Tracking in Homeland Security** – This center was established in 2003 in the School of Engineering with seed support from DARPA. It comprises a core research team of faculty members from the engineering disciplines and other schools who are actively involved in various aspects of homeland security. Research interests range from bio-terrorism detection to information security and public policy. In concert with the creation of the center, a major international conference on Advanced Technologies for Homeland Security was organized and held on September 25-26, 2003 (450 attendees) and August 12-13, 2004 (350 attendees).
- **Bioinformatics and Biocomputing Institute** – This institute unites researchers working in the medical and biosciences fields with computational researchers. Founded with initial partial support from the National Institutes of Health, it brings together faculty from the School of Engineering, Department of Molecular and Cell Biology, the Department of Statistics and the UConn Health Center with the objective of helping to enhance biomedical and biological research using advanced computing techniques.
- **Expanded Educational Programs** – The educational degree offerings have been increased from 16 to 22 distinct major programs since 1998, in strategic disciplines of national importance. Most of these new programs were at the undergraduate level in areas for which we already had a graduate program in place. These include Biomedical Engineering, Environmental Engineering, Engineering Physics and Materials Engineering.
- **Diversity Program** – Fourteen new female engineering faculty members were hired since 1998. Furthermore, in an effort to attract and retain a greater number of women and underrepresented students in the engineering disciplines, the School maintains three distinct, all-expenses-paid programs:

- **BRIDGE** – This six-week summer readiness program, which precedes the freshman year, is geared toward women and underrepresented populations enrolled in engineering.
- **Pre-Engineering** – This year-long Saturday math and science enrichment program introduces students in grades 7-9 to engineering; approximately 70 students participate yearly.
- **Multiply Your Options** – One-day conference pairing approximately 200 female 8th grade students yearly with women professionals in science, math, engineering and technology.

Because of the above and significant numbers of scholarships added since 2000, the School of Engineering has successfully increased female undergraduate enrollment by 41.8%, African American students by 60% and Hispanic students by 41%.

- **Significant Enrollment Increase** – From 1998-2006, the School of Engineering realized a 106% increase in total enrollment with an 100-point increase in average SAT score. Also, 45 high school valedictorians and salutatorians were admitted to the UConn School of Engineering in fall 2005 compared to seven in 1998. Among the programs the School of Engineering launched to involve Connecticut school children and teachers in the engineering disciplines are:
 - **Engineering 2000** – One week long residential summer camp for promising high school juniors and seniors, allowing 80 participants yearly to examine core engineering and technological concepts. Major financial support for participating students makes this experience virtually cost-free for them.
 - **Connecticut Invention Convention** – Host and sponsor, for five consecutive years, this state-wide K-12 competition held at Gampel Pavilion on the Storrs campus, which attracts an annual attendance of 2,000 including 650 elementary through high school students.
 - **da Vinci Workshop** – Five-day residential, short course introducing New England (primarily Connecticut) middle and high school math/science teachers to engineering and technology concepts and supplying them with academic units that may be easily infused into the preexisting curricula.
 - **Scholarships** – The School of Engineering has also tripled the number of academic scholarships awarded in the last five years. In 2004, the School of Engineering offered more than 300 merit-based scholarships funded by alumni, corporate, state and federal sources.
 - **Marketing** – The School developed an aggressive record of marketing materials, including four-color twice-yearly news magazines and high quality professional brochures for undergraduate and graduate recruitment as well as a suite of professional websites
- **Learning Mentorship Program** – A generous donation by a distinguished alumnus in 2003 allowed the School to launch an Engineering Learning Mentorship program with the objective of combating attrition among undergraduate students. The problem of attrition is common in engineering programs across the country and is particularly high among members of underrepresented populations, including women and minorities. Central to the Learning Mentorship program is a corps of senior engineering students who provide academic mentoring in fundamental coursework to target freshman and sophomore students. The program also invites peer advisors/graduate students who will help guide participating students through proper sequencing of course work, scheduling, and development of good study skills, time management and the like.
- **Fiscal Assessment of School Budgetary Structure** - Carefully defined, strategic financial planning has enabled the School of Engineering to dramatically improve its support of faculty despite budget cuts. Engaged in significant organizational and budgeting change with collaborative decision making to address reduction in state support for operating budget reallocated funds were used to address academic priorities. Initiatives include:
 - 15 Faculty searches are underway in 2006
 - Hiring of 24 new faculty between 2002 and 2003, including four chair professorships
 - Tripled the number of graduate teaching assistants
 - Doubling of travel support for faculty
 - Providing student support, as well as professional editing support, for faculty who seek to write books

- Doubling of staff support for Engineering Computing Services
- Introducing 200 additional scholarships for students since 1998
- Major renovations to all engineering facilities
- Creation of 17 new endowed and chair professorships since 1998
- Initiation of new graduate fellowships for qualified UConn undergraduate engineering students (with 3.5 GPA) who elect to pursue master's studies at UConn
- Significant enhancement of computer hardware and software resources valued at over \$100 million
- **Faculty and Staff Recognition** – New awards were established to recognize outstanding research, teaching and service among faculty and staff:
 - Distinguished Engineering Professor Award (maximum of six at any time) – entails a \$10,000 annual professional grant per faculty for each of three years.
 - Outstanding Junior Faculty Award (two each year) – entails a \$2,000 cash award and \$5,000 grant for professional development.
 - Outstanding Teaching Faculty Award (one each year) – entails a \$2,000 cash award and a \$5,000 grant for professional development.
 - Outstanding Staff Award – (one each year) entails a \$2,000 cash award.
 - Outstanding Engineering Doctoral Student Award (one each year) – entails a \$2,000 award each, to the student and his/her advisor.
 - Outstanding Engineering Master's Student Award (one each year) – entails a \$1,000 award each, to the student and his/her advisor.
- **Alumni Relations and Cultivation Activity** - The Academy of Distinguished Engineers, launched in 2003, recognizes and honors our most exceptional alumni, who will be elected and inducted into the Engineers Hall of Fame each year. In creating this Academy, the selection procedures and detailed governing bylaws were developed. Since 2003, 75 fellows were selected, and inducted during the School of Engineering Annual Awards banquet before an audience of more than 600 UConn School of Engineering alumni, faculty, students, corporate leaders and guests.

Furthermore, alumni development initiatives have included a series of breakfasts, dinners and/or receptions in key cities (Hartford, CT; Stamford, CT; Washington, DC; Boston, MA, New York, NY, Florida, San Francisco, CA and Los Angeles, CA) as well as production of a high quality, semi-annual four-color alumni newsletter. Other activities centered on creation of a list of 350+ top alumni prospects who have the resources to support significant gifts to the School. Since 1998, our Alumni Annual fund has realized a 440% increase in dollar donations and a 556% increase in number of donors.

- **University/Industry** - The School of Engineering developed a new model for university/industry partnerships that accounts for issues of intellectual properties. The model developed so that intellectual property, including technology rights, royalties and licenses is pursued with greater interest among faculty. For example, major corporations such as UTC (\$4 million) and GE (\$2.5 million) have already invested in this endeavor.
- **Practice-Oriented Master's Degree** – The School developed an on-site, practice-oriented Master of Engineering degree program for corporations, including the possibility of distance education, which debuted in fall '99. To date, more than 300 participants have availed themselves of this degree program.
- **Accreditation** – The Accreditation Board for Engineering & Technology (ABET) and the Computer Science Accreditation Board (CSAB) review in September 2001 yielded full six years of accreditation in all six reviewed programs.

1994-1998 **Professor and Head**, Department of Mechanical Engineering, University of Connecticut, Storrs, CT.

The Mechanical Engineering Department at the University of Connecticut made significant advances in faculty recruitment, curriculum development, research achievement, resource acquisition, and administrative innovation. Major accomplishments, in addition to teaching responsibilities, included:

- Between 1994-96, facilitated a four-fold increase in federal and industrial research funding to the Department over 1992-94 figures.
- In the 1998-99 academic year, the UConn Mechanical Engineering Department offered for the first time an unprecedented number of scholarships, valued at \$200,000, to entering freshmen. Industrial friends of the department provided the funding for this effort.
- Recruited five new outstanding tenure-track faculty members and initiated searches for three additional candidates.
- Strengthened and standardized academic program and degree requirements for undergraduate and graduate students with federal funds provided to the School of Engineering.
- Strengthened the ME undergraduate program by securing significant industrial sponsorship for senior design projects. Twenty participating companies invested \$5,000 each. Initiated additional changes and innovations in the undergraduate curriculum, and significantly increased opportunities for undergraduate research.
- A review by the Accreditation Board for Engineering and Technology (ABET) in September 1995 yielded six years of accreditation. The ABET team noted high morale among faculty as well as major improvements in curriculum.
- All undergraduate students with a GPA of 3.4 or above were provided financial support to conduct research under faculty supervision for up to 15 hours per week during the academic year and full time during the summer.
- Oversaw development of five new teaching and research laboratories. Fourteen faculty offices were completely renovated and furnished with new furniture.
- Initiated an annual Mechanical Engineering Department Outstanding Faculty Award, which carries a \$5,000 stipend.
- Published the first professional-quality color undergraduate recruitment brochure, biennial report and graduate handbook.
- Initiated a one-week, intensive technical writing workshop as well as a one-week Machine Shop Safety course, both offered free of charge for graduate students.

SELECTED PROFESSIONAL AND ACADEMIC SERVICE APPOINTMENTS

Chair, NSF Workshop, "Frontiers in Transport Phenomena Research and Education: Energy Systems, Biological Systems, Security, Information Technology and Nanotechnology" May 16-17, 2007.

Chair, Five Year Review of School of Nursing Dean, 2005-2006.

Member, Search Committee, Vice Provost for Undergraduate Education and Administration, 2005.

Member, Board of Directors, Roller Bearings of America, Co. July 2004-Present.

Member, NSF Review Panel, "Thermal Transport and Processing G2," September 24, 2002.

Member, NSF Review Panel, "Fluid Particle Processes," September 5, 2001.

Engineering Review Panel, Howard University, March 12-13, 2001.

Chair, Engineering Committee, Louisiana Board of Regents, Department Excellence Through Faculty Excellence, 2000.

Member, ASME Heat Transfer Honors & Awards Committee, 1999-2001.

Chair, Fine Arts Dean's Search Committee, UConn, 1999-2000.

Member, Faculty Extra-Compensation Committee, UConn, 2000.

Member, Dean's Council, UConn, 1998 - Present.

Chair, Academic Council, UConn, 1998 – Present.

Member, Editorial Board of the Second International Conference on Engineering Computational Technology, Leuven, Belgium, September 6-8, 2000.

Member, Science Concept Review for Heat Pipe Flight Experiment, NASA, September 16, 1997.

Member, Research Group for Space Exploration, NASA Microgravity Division, August 4-7, 1997.

Member, UConn Assessment Committee, 1996.

Head, Mechanical Engineering Department, University of Connecticut, 1994-1998.

Chair, R. A. Seban Fellowship Endowment Committee, University of California, Berkeley, 1994-95.

Member, AIAA Thermophysics Committee, 1996-1999.

U.S. Department of Energy, panel review for Basic Energy Sciences Program, November 1993.

Member, AIAA Terrestrial Energy Technical Committee, 1993-1996.

Member, College of Engineering and Computer Science By-Law Committee, WSU, 1993-1994.

Member, WSU Academic Affairs Committee, 1993-1994.

Faculty Advisor for AIAA Student Chapter at WSU, 1985-1994.

Member, Faculty Research Committee, Department of Mechanical and Materials Science Engineering, WSU, 1993.

Member, College of Engineering and Computer Science Steering Committee, WSU, 1993-1994.

Member, WSU Budget Review Committee, 1992-1993.

U.S. Department of Energy, Panel Review for Solar Thermal Energy Research Program, March 1992.

Member, AIChE Space Technology Area Committee, 1992-1995.

Member, WSU Academic Council, 1991-1993.

Chair, Graduate Committee for College of Engineering and Computer Science, WSU, 1987-1989.

Ohio Aerospace Institute Campus Coordinator, 1988-1990.

Member, Ph.D. Committee for College of Engineering and Computer Science, WSU, 1987-1990.

Member, Mechanical Engineering Curriculum Committee, WSU, 1984-1987.

Member, WSU Graduate Council, 1986-1988.

Member, Graduate Admission Committee, WSU 1983-1984.

Member, Undergraduate Curriculum Committee, WSU, 1983-1985.

HONORS AND AWARDS

2005 American Society of Mechanical Engineers (ASME) James Harry Potter Gold Medal
2005 Invited Distinguished University Lecturer, Cornell University
2004 United Technologies Endowed Chair Professor in Thermal-Fluids Engineering
1999 Induction to Oregon State University Council Distinguished Engineers
1999 American Institute of Aeronautics and Astronautics (AIAA) Certificate of Distinguished Service
1998 American Society of Mechanical Engineers (ASME) Heat Transfer Memorial Award
1998 Member of Connecticut Academy of Science and Engineering
1998 American Institute of Aeronautics and Astronautics (AIAA) Thermophysics Award
1997 Honorary member, Editorial Advisory Board, *International Journal of Heat and Mass Transfer*
1997 Honorary member, Editorial Advisory Board, *Communication in Heat and Mass Transfer*
1996 Certificate of Appreciation Award, Heat Transfer Division, American Society of Mechanical Engineers (ASME)
1996 Elected Fellow of American Society of Mechanical Engineers (ASME)
1996 ASME Recognition Award for organizing the heat transfer sessions at the ASME European Conference in Montpellier, France
1994 ASME Certificate Award for organizing the Advances in Heat Transfer Symposium in the ASME European conference in London, England
1993 Associate Technical Editor for ASME *Journal of Heat Transfer*
1992 Certificate of Appreciation for sponsoring the Advances in Heat Transfer seminar by the National Society of Black Engineers
1992 ASME Certificate Award for organizing the Engineering Systems and Design Analysis Conference in Istanbul, Turkey
1989 Brage Golding Distinguished Professor, Wright State University (WSU)
1989 Outstanding Faculty Research Award, College of Engineering and Computer Science, WSU
1987 Outstanding Faculty Research Award, College of Engineering and Computer Science, WSU
1982 AFSOR Summer Faculty Fellow
1979 AUT Outstanding University Teaching Award
1978 UNESCO Faculty Fellowship
1971-1972 Finalist in the Oregon State University Outstanding Student Award
1972 Alcoa Foundation Undergraduate Award
1970-1973 Oregon State University Scholarship
1970-1973 Honor Roll during all undergraduate work

PROFESSIONAL ACTIVITIES AND SERVICE

EDITORIAL POSITIONS

Honorary Editorial Advisory Board, *International Journal of Heat and Mass Transfer*. (1997-Present)

Editorial Board, *Journal of Process Mechanical Engineering*. (1998-2003)

Editorial Advisory Board, *International Journal of Numerical Methods for Heat and Fluid Flow*. (1998-Present)

Honorary Member, Editorial Advisory Board, *Communication in Heat and Mass Transfer*. (1997-Present)

Editorial Board, *Journal of Heat Transfer Research*. (1997-Present)

Editorial Board, *Journal of Applied Thermal Engineering*. (1996-Present)

Executive Editor, *Heat Transfer Engineering Journal* (Thermal Storage & Heat Pipes). (1993-Present)

North American Editor, *Journal of Enhanced Heat Transfer*. (1993-Present)

Editorial Board, ASME *Journal of Heat Transfer*. (1993-1996)

RECENT CONFERENCE ACTIVITY (1992-2007)

Chair, NSF Workshop, Frontiers in Transport Phenomena Research and Education: Energy Systems, Biological Systems, Security, Information Technology and Nanotechnology, Storrs, CT, May 17-18, 2007

Member, International Advisory Board, 8th International Heat Pipe Symposium, Kumamoto, Japan, September 24-27, 2006.

Member, International Scientific Committee, VI Minsk International Seminar, Heat Pipes, Heat Pumps, Refrigerators, Minsk, Belarus, September 12-15, 2005.

General Chair, 2004 Second International Conference on Advanced Technologies for Homeland Security, Storrs, CT, August 12-13, 2004.

General Chair, 2003 First International Conference on Advanced Technologies for Homeland Security, Storrs, CT, September 25-26, 2003.

Member, International Science Committee, V Minsk International Seminar, Heat Pipes, Heat Pumps, Refrigeration, Minsk, Belarus, September 8-11, 2003.

Member, Scientific Committee, 12th International Heat Transfer Conference, Grenoble, France, August 18-23, 2002.

Member, Organizing Committee, Symposium on Energy Engineering in the 21st Century, Hong Kong, January 9-13, 2000.

Member, Editorial Board of the Second International Conference on Engineering Computational Technology, Leuven, Belgium, September 6-8, 2000.

Member, International Scientific Committee, Heat Pipes, Heat Pumps, Refrigeration, 1999.

Chair, Thermophysics Conference, 1999 Aerospace Sciences Meeting and Exhibition, Reno, NV, January 11-14, 1999.

Chair, Thermomechanics, 1996 ESDA (ASME European Joint Conference), France, July 1996.

Chair, "Heat Pipes for Space Applications," 29th National Heat Transfer Conference, Atlanta, Georgia, August 1993.

Chair, "Thermal Processes," International Conference on Computational Engineering Science (ICES, 92), Hong Kong, December 1992.

Chair, "Fundamental Research and Basic Processes," 8th International Heat Pipe Conference, Beijing, China, September 1992.

Chair and Organizer of the Heat Transfer Sessions (I, II, & III) at the ASME European Joint Conference on Engineering Systems Design and Analysis, Turkey, 1992.

KEYNOTE ADDRESSES AND INVITED LECTURES
At National and International Conferences

“Transport Phenomena in Porous Media,” AIAA/ASME Joint Thermophysics meeting, San Francisco, CA, June 5-8, 2006 (Invited Presentation)

“Opportunities and Challenges in (Micro-Miniature) Technologies for Advanced Energy Systems including Fuel Cells and Heat Pipes,” Cornell University, Ithaca, NY, April 3-5, 2005. (Invited University Lecture)

“Fostering Diversity in Engineering Education, Challenges & Opportunities,” NSF Workshop for Development of Minority Faculty in Engineering, Washington, DC, October 16-19, 2004 (Invited Keynote Presentation)

“Research Challenges and Opportunities in Micro/Miniature Heat Pipes for Energy Systems,” International Energy Conversion Engineering Conference, Providence, RI, August 16-19, 2004. (Invited Keynote Presentation)

“Advances in Micro Heat Pipes for Electronic Cooling,” Swiss Federal Institute of Technology, Zurich, July 8, 2002. (Invited Presentation)

“Thermal Modeling of Unlooped and Looped Pulsating Heat Pipes,” 2001 International Mechanical Engineering Congress & Exhibition, New York, NY, November 11-16, 2001. (Invited Paper)

“Transient Gas-Loaded Rotating Heat Pipes,” 4th ISHMT/ASME Heat and Mass Transfer Conference, Pune, India, January 12-14, 2000. (Invited Presentation)

“Advances & Challenges in Micro/Miniature Heat Pipes,” 11th International Heat Pipe Conference, Musashinoshi, Japan, September 12-16, 1999. (Keynote Speaker)

“Heat Pipe Simulation, From Promise to Reality,” 5th International Heat Pipe Symposium, Melbourne, Australia, November 17-20, 1996. (Keynote Speaker)

“Recent Advances and Challenges in Heat Pipe Science & Technology,” 9th International Heat Pipe Conference, Albuquerque, NM, May 1-5, 1995. (Invited Paper)

“Recent Developments in Computational Analysis of Heat Pipes,” 6th AIAA/ASME Joint Thermophysics and Heat Transfer, Colorado Springs, CO, June 1994. (Invited Paper)

“Recent Advances and Future Challenges in Fundamentals of Heat Transfer Analysis for Space Application,” 29th ASME National Heat Transfer Conference, Atlanta, GA, August 1993. (Invited Paper)

“Developments in Heat Pipe Science and Technology,” International Congress on Computational Methods in Engineering, Shiraz, Iran, May, 1993. (Keynote Speaker)

“State of the Art in Heat Pipe Modeling,” 28th ASME National Heat Transfer Conference, San Diego, CA, August 1992. (Keynote Speaker)

“Analytical Modeling for Heat Pipe Performance for Space Radiator Applications,” Interagency Advanced Power Group, Dayton, OH, October 26, 1992. (Invited Paper)

“Experimental and Numerical Analysis of Heat Pipes,” 1992 Heat Pipe Workshop, Korea, September 21-22, 1992. (Invited Paper)

“Numerical Simulation of Heat Pipes,” 4th International Conference on Computational Engineering Science (ICES-92), Hong Kong, December 1992. (Invited Paper)

“Experimental and Numerical Analysis of Heat Pipes,” WRDC/SDIO Thermal Management, Monterey, CA, December 12-15, 1989. (Invited Paper)

“Heat Pump Absorption Analysis for Space Application,” workshop sponsored by NASA on two-phase fluid behavior, Ocean City, MD, June 13-14, 1988. (Invited Paper)

“Double-Walled Concentric Heat Pipes,” workshop sponsored by the NSF for Research Needs in Electronic Cooling, Boston, MA, June 4-6, 1986. (Invited Paper)

“Prediction of Transport Properties of Liquids,” 6th National Heat and Mass Transfer Conference, IIT, Madras, India, December 29-31, 1981. (Invited Paper)

“Transport to Falling Liquid Films,” UNESCO Heat and Mass Transfer Workshop, IIT, Madras, India, October 1978. (Invited Paper)

RESEARCH GRANTS AND CONTRACTS AS PRINCIPAL INVESTIGATOR

NSF, "Frontiers in Transport Phenomena Research and Education: Energy Systems, Biological Systems, Security, Information Technology and Nanotechnology", May-2007 – April 2008 (\$150,000) Co-PI -Ted Bergman.

NSF, "A New, Innovative Miniature Passive Direct Methanol Fuel Cell," June - 2005 to Nov – 2006 (\$110,852) Co-PI Zhen Guo

U.S. Army, Portable Fuel Cells, October - 2004 to August 15 – 2006 (\$1,150,000) (Principal Investigator)

U.S. Army, Advanced Technology for Portable Miniature and Micro Fuel Cells, February 23, 2003 to July 22, 2004 (\$3,102,300) (Principal Investigator).

U.S. Army, Portable Fuel Cell Power Systems, June 2, 2002 to August 31, 2003, (\$1,990, 263) Co-PI Patricia Bergman.

General Electric, "A Comprehensive Technology Research Partnership," March 9, 2000 to December 31, 2001 (\$1,500,000) (Principal Investigator).

NASA, Microgravity Science & Application Division, Heat Transfer in Rotating Thin Liquid Films including Nucleate Boiling, June 1, 2000 to November 20, 2004, (\$340,000) Co-PI Baki Cetegen.

NSF, "Critical Phenomena in Miniature Passages with Microgrooves during Vaporization and Forced Convection and/or Capillary Action," September 1, 1997 to April 30, 2000 (\$120,000) (Principal Investigator).

U.S. Air Force, "Micro/Miniature Heat Pipe Science and Technology for Electronic Cooling," September 1, 1997 to December 30, 2000 (\$195,000) (Principal Investigator).

NASA, Microgravity Science & Application Division, "Evaporation, Boiling and Condensation, on/in Capillary Structures of High Heat Flux Two Phase Devices," NAG3-1870, May 9, 1996 to May 31, 2001 (\$360,000) (Principal Investigator).

DOE, AGSTR, "Heat Pipe Turbine Vane Cooling," September 1, 1995 to December 30, 1996 (\$89,000) (Principal Investigator), Co-PI Lee Langston.

Hamilton Standard Division, "Design of Heat Pipes for Space Vehicles," September 1, 1995 to May 30, 1997 (\$8,000) (Principal Investigator).

NSF, "Analysis of Innovative Enhanced Evaporator and Condenser Miniature Capillary-Grooved Structures with High Heat Fluxes," May 1, 1994 to April 30, 1997 (\$188,105) (Principal Investigator).

Ohio Research Challenge, "Heat and Mass Transfer in Phase-Change Materials," February 1993 to December 1993 (\$24,906) (Principal Investigator).

Phillips Laboratory, "Frozen Startup Simulation," July 1992 to July 1993 (\$80,000) (Principal Investigator).

SDIO/IST, "Electronic Cooling for Space Using Micro Heat Pipes," June 1992 to June 1997 (\$508,913) (Principal Investigator).

NASA and U.S. Air Force joint effort, "Modeling of High Temperature Heat Pipe Start-Up From the Frozen State," July 1991 to July 1994 (\$330,000) (Principal Investigator).

NASA and U.S. Air Force joint effort contract F33615-88-C-2820, "Analysis of Heat Pipes with Multiple Heat Sources and Sinks," May 1988 to May 1991 (\$416,000) (Principal Investigator).

Ohio Aerospace Institute Grant, "Ultrasonic Measurement of Interface Position During Solidification," July 1989 to September 1991 (\$61,875) (Graduate Student Support).

SCEEE, Contract F33615-86-C-2720, "Analysis of Heat Pipes with Localized Heat Input," October 1987 to September 1988 (\$111,142) (Principal Investigator).

NASA Goddard Space Flight Center, Contract NAG 5-956, "Basic Heat Transfer Research Related to Development of a Spacecraft Absorption Cooling System," July 1987 to July 1990 (\$210,420) (Principal Investigator).

U.S. Air Force AFWAL Propulsion Laboratory, Contract F33615-81-C-2012, "Analysis of the Double-Walled Concentric Heat Pipe," January 1987 to September 1987 (\$62,137) (Principal Investigator).

PSM Inc., "Flexible Heat Pipes for Low Temperature Application," September to December 1986 (\$5,000) (Principal Investigator).

U.S. Air Force AFWAL Aero Propulsion Laboratory, Contract F33615-81-C-2012, "Analysis of Heat Pipes," June 1985 to September 1986 (\$80,699) (Principal Investigator).

Copeland Corporation, "Compressor Test Analysis," 1985 to 1986 (\$12,000) (Principal Investigator).

AFOSR Grant No. F49620-82-C-0035, "Analysis of Condensation Phenomena for Conventional Heat Pipes," January to December 1984 (\$17,317) (Principal Investigator).

AFOSR Grant., "Heat Pipe Analysis," June to September 1983 (\$12,000) (Summer Fellowship grant for one faculty and one graduate student).

PATENTS

1. Faghri, A., Thermal Energy Storage Heat Exchanger. U.S. Patent number 4976308. Date of issue: December 11, 1990. Sole Inventor
2. Faghri, A., Micro Heat Pipe Energy Storage System. U.S. Patent number 5000252. Date of issue: March 19, 1991. Sole Inventor
3. Faghri, A., Centrifugal Heat Pipe Vapor Absorption Heat Pump. U.S. Patent number 5201196. Date of issue: April 13, 1993. Sole Inventor
4. Faghri, A., Effective Composite Liner. U.S. Patent number 5225812. Date of issue: July 6, 1993. Sole Inventor
5. Faghri, A., Temperature Regulation System for the Human Body Using Heat Pipes. U.S. Patent number 5269369. Date of issue: December 14, 1993. Sole Inventor
6. Faghri, A., Centrifugal Heat Pipe System. U.S. Patent number 5297619. Date of issue: March 29, 1994. Sole Inventor
7. Faghri, A., Micro Heat Pipe Embedded Bipolar Plates for Fuel Cell Stacks, Serial number 10/632,440, submitted July, 31, 2003
8. Faghri, A., Integrated Bipolar Plate Heat Pipe for Fuel Cell Stacks, Serial number 10/640,122, submitted August 13, 2003.
9. Faghri, A. and Guo, Z., Planar Fuel Cell Stack and Method of Fabrication, Serial number 10/157,695, submitted June 21, 2005.
10. Faghri, A., and Guo, Z., Thermal-Fluids Management System for Small Direct Methanol Fuel Cells, Serial number 11/153,737, submitted June 15, 2005.
11. Faghri, A., and Guo, Z., Vapor Feed Fuel Cells with a Passive Thermal-Fluids Management Systems, submitted April, 2006.

CONSULTING

Roller Bearings of America, Co., 2004 - Present, Board of Directors (public company)

ThermoTek, 2001, Electronic Cooling.

Intel, 2000, Heat Pipe Science & Technology.

Louisiana Board of Regents, 2000, Departmental Excellence through Faculty Excellence.

International Electronic Research Corporation, 1997, Thermal management for electronic devices.

U.S. Air Force/WSU, 1994-96, Electronic Cooling Using Micro Heat Pipes.

Oak Ridge National Laboratory, 1993, Applied Heat Transfer Analysis.

Oak Ridge National Laboratory, 1992, Solar Thermal Systems.

CSA Engineering Inc., 1991, Transient Analysis of Nonconventional Heat Pipes.

L.O. Warner Inc., 1989, Heat and Flow in Porous Insulated Material.

Los Alamos National Laboratory, 1988, Vacuum Tube Thermal Management.

Oak Ridge National Laboratory, 1988, Heat Transfer Analysis in Energy Storage Systems.

Reynolds & Reynolds, Inc., 1987, Electronics Cooling.

PSM Inc., 1986, Heat Transfer Analysis of a Low Temperature Flexible Heat Pipe.

AFWAL Aero Propulsion Laboratory, 1982 to 1983, Prediction of Flow in Porous Media under Conditions of Condensation and Evaporation.

Emdad Engineering Inc., 1980, Heat Transfer Analysis Associated with an Absorption Refrigeration Cycle for Solar Application

PUBLICATIONS

BOOKS

1. A. Faghri, and Zhang, Y., Transport Phenomena in Multiphase Systems, 2006 by Elsevier, 1012 pages, 403 figures, 292 problems and 63 examples, ISBN: 0-12-370610-6.
2. A. Faghri, Heat Pipe Science and Technology, copyright 1995 by Taylor & Francis Incorporated, 912 pages, 319 illustrations, ISBN: 1-56032-383-3.
3. A. Faghri, Thermal Science Measurements, copyright 1991 by Kendall/Hunt Publishing Company, ISBN: 0-8403-6802-X.

EDITED VOLUMES

1. R. Ohagon, A. Faghri, R.M. Eslami, A. Becker and A. Chrysochoos, "Computational Mechanics and Thermomechanics," published by ASME, PD-vol. 78, 1996.
2. A. Faghri and M. A. Yaghoubi, "Advances in Heat Transfer," published by ASME, PD-vol. 64-1, 1994.
3. A. Faghri, A. J. Juhasz and T. Mahefkey, "Heat Pipes and Capillary Pumped Loops," published by ASME, HTD-vol. 236, 1993.
4. A. Faghri, "Heat Transfer," published by ASME, PD volumes 47-3, 1992.

BOOK CHAPTERS AND SECTIONS

1. A. Faghri, "Advances and Challenges in Micro/Miniature Heat Pipes," Annual Review of Heat Transfer, Volume 12, 2001, pp 1-26.
2. A. Faghri, "Introduction to Heat Pipe Design & Theory," Handbook of Heat Transfer & Fluid Flow, Genium Publishing Corp., 2000.
3. A. Faghri, "Recent Advances in Heat Pipe Analysis and Simulation," Annual Review of Heat Transfer, Volume 8 (ARHT-VIII), 1997.
4. A. Faghri, "Heat Sinks with Microchannels: Heat Transfer and Fluid Flow," McGraw-Hill Yearbook of Science & Technology, 1997.
5. A. Faghri, "Performance Characteristics of an Annular Heat Pipe," Experiments in Heat Transfer and Thermodynamics, Edited by Robert A. Granger, Cambridge University Press, 1994.

JOURNAL ARTICLES

1. Seban, R. A. and **Faghri, A.**, "Evaporation and Heating with Turbulent Falling Liquid Films," ASME *Journal of Heat Transfer*, Vol. 98, 1976, pp. 315-318.
2. Seban, R. A. and **Faghri, A.**, "Wave Effects on the Transport to Falling Laminar Liquid Films," ASME *Journal of Heat Transfer*, Vol. 100, 1978, pp. 143-147.
3. **Faghri, A.** and Payvar, P., "Transport to Thin Falling Liquid Films," Reg. *Journal of Energy Heat and Mass Transfer*, Vol. 1, 1979, pp. 153-173.
4. Faghri, M., Javdani, K., and **Faghri, A.**, "Heat Transfer with Laminar Pulsating Flow in a Pipe," *Letters in Heat and Mass Transfer Journal*, Vol. 6, 1979, pp. 259-263.
5. **Faghri, A.**, Javdani, K., and Faghri, M., "The Effect of Flow Pulsation on Laminar Heat Transfer Between Two Parallel Plates," *Journal Wärme und Stoffübertragung*, Vol. 13, 1980, pp. 97-102.
6. **Faghri, A.** and Riazi, R., "Evaluation of the Momentum, Heat and Mass Transfer Diffusion Coefficients for Liquids," *International Communications in Heat and Mass Transfer Journal*, Vol. 10, 1983, pp. 385-394.
7. **Faghri, A.**, "Prediction of Heat and Mass Transfer for Absorption of a Gas to a Liquid Film," *Numerical Methods in Thermal Problems*, Vol. III, 1983, pp. 981-990.
8. Seban, R. A. and **Faghri, A.**, "Film Condensation in a Tube with a Closed Top," *International Journal of Heat and Mass Transfer*, Vol. 27, 1984, pp. 944-948.
9. **Faghri, A.**, Stewart, R. J. and Rainey, C. L., "Axial Variation of Local Heat Flux Along the Condenser Section of a Double Wall Artery High Capacity Heat Pipe," *Research and Development of Heat Pipe Technology*, Vol. I, 1984, pp. 108-112.
10. Riazi, R. and **Faghri, A.**, "Thermal Conductivity of Liquids and Vapor Hydrocarbon Systems: Pentanes and Heavier at Low Pressure," *Industrial & Engineering Chemistry, Processes Design and Development Journal*, Vol. 24, 1985, pp. 398-401.
11. Riazi, R. and **Faghri, A.**, "Prediction of the Thermal Conductivity of Gases at High Pressure," *AIChE Journal*, Vol. 31, 1985, pp. 164-167.
12. **Faghri, A.** and Seban, R. A., "Heat Transfer in Wavy Liquid Films," *International Journal of Heat and Mass Transfer*, Vol. 28, 1985, pp. 506-509.
13. Riazi, R. and **Faghri, A.**, "Solid Dissolution with First Order Chemical Reaction," *Chemical Engineering Science*, Vol. 40, No. 8, 1985, pp. 1601-1603.
14. Riazi, R. and **Faghri, A.**, "Gas Absorption with Zero-Order Chemical Reaction," *AIChE Journal*, Vol. 31, No. 2, December 1985, pp. 1967-1972.
15. Riazi, R. and **Faghri, A.**, "Effect of the Interfacial Drag on Gas Absorption with Chemical Reaction in a Vertical Tube," *AIChE Journal*, Vol. 32, 1986, pp. 696-699.
16. **Faghri, A.**, "Vapor Flow Analysis in a Double-Walled Concentric Heat Pipe," *Numerical Heat Transfer*, Vol. 12, No. 6, December 1986, pp. 583-595.
17. **Faghri, A.**, "An Approach to Developing the Laboratory Through Senior Design Projects," *Journal of Engineering Education*, December 1987, pp. 184-186.

18. **Faghri, A.**, and Parvani, S., "Numerical Analysis of Laminar Flow in a Double-Walled Annular Heat Pipe," *AIAA Journal of Thermophysics and Heat Transfer*, Vol. 2, No. 3, 1988, pp. 165-171.
19. **Faghri, A.** and Chow, L. C., "Forced Condensation in a Tube with Suction at the Wall for Microgravity Applications," *ASME Journal of Heat Transfer*, Vol. 110, No. 4, November 1988, pp. 982-985.
20. **Faghri, A.** and Seban, R., "Heat and Mass Transfer to a Turbulent Liquid Film," *International Journal of Heat and Mass Transfer*, Vol. 31, No. 4, 1988, pp. 891-894.
21. **Faghri, A.**, Chen, M. M. and Mahefkey, E. T., "Simultaneous Axial Conduction in the Fluid and the Pipe Wall for Forced Convective Laminar Flow with Blowing and Suction at the Wall," *International Journal of Heat and Mass Transfer*, Vol. 32, No. 2, February 1989, pp. 281-288.
22. **Faghri, A.**, Chen, M. M. and Morgan, M., "Heat Transfer Characteristics in Two-Phase Closed Conventional and Concentric Annular Thermosyphons," *ASME Journal of Heat Transfer*, Vol. 111, No. 3, 1989, pp. 611-618.
23. **Faghri, A.** and Thomas, S., "Performance Characteristics of a Concentric Annular Heat Pipe, Part I, Experimental Prediction and Analysis of the Capillary Limit," *ASME Journal of Heat Transfer*, Vol. 111, No. 4, 1989, pp. 844-850.
24. **Faghri, A.**, "Performance Characteristics of a Concentric Annular Heat Pipe, Part II, Vapor Flow Analysis," *ASME Journal of Heat Transfer*, Vol. 111, No. 4, 1989, pp. 851-857.
25. Cao, Y., **Faghri, A.**, and Mahefkey, E. T., "The Thermal Performance of Heat Pipes with Localized Heat Input," *International Journal of Heat and Mass Transfer*, Vol. 32, No. 7, 1989, pp. 1279-1287.
26. Cao, Y., **Faghri, A.**, and Chang, W. S., "A Numerical Analysis of Stefan Problems for Generalized Multi-Dimensional Phase-Change Structures Using the Enthalpy Transforming Model," *International Journal of Heat and Mass Transfer*, Vol. 32, No. 7, 1989, pp. 1289-1298.
27. **Faghri, A.** and Chen, M. M., "Numerical Analysis of the Effects of Conjugate Heat Transfer, Vapor Compressibility and Viscous Dissipation in Heat Pipes," *Numerical Heat Transfer Journal*, Part A, Vol. 16, 1989, pp. 389-405.
28. **Faghri, A.** and Seban, R. A., "Heat and Mass Transfer to a Turbulent Falling Film - II," *International Journal of Heat and Mass Transfer*, Vol. 32, No. 9, 1989, pp. 1796-1798.
29. **Faghri, A.**, Reynolds, D. B., Faghri, P., "Heat Pipes for Hands," *Mechanical Engineering*, Vol. 111, No. 6, 1989, pp. 72-75.
30. Cao, Y. and **Faghri, A.**, "Thermal Protection from Intense Localized Moving Heat Fluxes Using Phase-Change Materials," *International Journal of Heat and Mass Transfer*, Vol. 33, No. 1, 1990, pp. 127-138.
31. Cao, Y. and **Faghri, A.**, "A Numerical Analysis of Phase-Change Problems Including Natural Convection," *ASME Journal of Heat Transfer*, Vol. 112, No. 3, 1990, pp. 812-816.
32. Chen, M. N. and **Faghri, A.**, "An Analysis of the Vapor Flow and the Heat Conduction Through the Liquid-Wick and Pipe Wall in a Heat Pipe with Single or Multiple Heat Sources," *International Journal of Heat and Mass Transfer*, Vol. 33, No. 9, 1990, pp. 1945-1955.
33. Cao, Y. and **Faghri, A.**, "Heat Transfer in Liquid Metals by Natural Convection," *International Journal of Heat and Mass Transfer*, Vol. 33, No. 6, 1990, pp. 1367-1370.
34. Thomas, S., Hankey, W., **Faghri, A.**, and Swanson, T., "One-Dimensional Analysis of the Hydrodynamic and Thermal Characteristics of Thin Film Flows Including the Hydraulic Jump and Rotation," *ASME Journal of Heat Transfer*, Vol. 112, No. 3, 1990, pp. 728-735.

35. Rahman, M. M., **Faghri, A.**, Hankey, W. L., and Swanson, T., "Prediction of Heat Transfer to a Thin Liquid Film in Plane and Radially Spreading Flows," ASME *Journal of Heat Transfer*, Vol. 112, No. 3, 1990, pp. 822-825.
36. Rahman, M. M., **Faghri, A.**, Hankey, W., and Swanson, T., "Computation of the Free Surface Flow of a Thin Liquid Film at Zero and Normal Gravity," *Numerical Heat Transfer*, Part A, Vol. 17, No. 1, 1990, pp. 53-71.
37. **Faghri, A.**, "Heat Transfer Characteristics in Annuli with Blowing or Suction at the Walls," AIAA *Journal of Thermophysics and Heat Transfer*, Vol. 4, No. 1, 1990, pp. 59-66.
38. Rahman, M. M., **Faghri, A.**, and Hankey, W. L., "New Methodology for the Computation of Free Surface Flow Using a Permeable Wall," *Numerical Heat Transfer*, Part B: Fundamentals, Vol. 18, No. 1, 1990, pp. 23-41.
39. Jang, J., **Faghri, A.**, Chang, W. S., and Mahefkey, E. T., "Mathematical Modeling and Analysis of Heat Pipe Start-Up From the Frozen State," ASME *Journal of Heat Transfer*, Vol. 112, No. 3, 1990, pp. 586-594.
40. Cao, Y. and **Faghri, A.**, "A Transient Two-Dimensional Compressible Analysis for High Temperature Heat Pipes with a Pulsed Heat Input," *Numerical Heat Transfer*, Part A, Vol. 18, No. 4, 1990, pp. 483-502.
41. Cao, Y. and **Faghri, A.**, "Performance Characteristics of a Thermal Energy Storage Module: A Transient PCM/Forced Convection Conjugate Analysis," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 1, 1991, pp. 93-101.
42. Rahman, M. M., Hankey, W., **Faghri, A.**, "Analysis of the Fluid Flow and Heat Transfer in a Thin Liquid Film in the Presence and Absence of Gravity," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 1, 1991, pp. 103-114.
43. Cao, Y., **Faghri, A.**, and Juhasz, A., "A PCM/Forced Convective Conjugate Transient Analysis of Energy Storage Systems with Annular and Counter-Current Flows," ASME *Journal of Heat Transfer*, Vol. 113, No. 1, 1991, pp. 37-42.
44. Thomas, S., **Faghri, A.**, and Hankey, W. L., "Experimental Analysis and Flow Visualization of Thin Liquid Film on a Stationary Rotating Disk," ASME *Journal of Fluids Engineering*, Vol. 113, No. 1, 1991, pp. 73-80.
45. Yerkes, K. L. and **Faghri, A.**, "An Experimental and Numerical Simulation of Mixed Convection in Large Baffled Rectangular Chambers," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 6, 1991, pp. 1525-1542.
46. Jang, J., **Faghri, A.**, and Chang W. S., "Analysis of the Transient One-Dimensional Compressible Vapor Flow in Heat Pipes," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 8, 1991, pp. 2029-2037.
47. **Faghri, A.** and Thomas, S., "An Approximate Solution of the Thermal-Entry-Length Fluid Flow and Heat Transfer Characteristics in Annuli With Blowing at the Walls," AIAA *Journal of Thermophysics and Heat Transfer*, Vol. 5, No. 3, 1991, pp. 446-448.
48. Rahman, M. M., **Faghri, A.**, and Hankey, W. L., "Computation of Turbulent Flow in a Thin Liquid Layer of Fluid Involving a Hydraulic Jump," *ASME Journal of Fluids Engineering*, Vol. 113, No. 3, 1991, pp. 411-418.
49. **Faghri, A.** and Buchko, M., "Experimental and Numerical Analysis of Low Temperature Heat Pipes With Multiple Heat Sources," ASME *Journal of Heat Transfer*, Vol. 113, No. 3, 1991, pp. 728-734.
50. **Faghri, A.**, Buchko, M., and Cao, Y., "A Study of High Temperature Heat Pipes with Multiple Heat Sources and Sinks, Part II: Analysis of Continuum Transient and Steady State Experimental Data with Numerical Prediction," ASME *Journal of Heat Transfer*, Vol. 113, No. 4, 1991, pp. 1010-1016.

51. **Faghri, A.**, Buchko, M., and Cao, Y., "A Study of High Temperature Heat Pipes with Multiple Heat Sources and Sinks, Part I: Experimental Methodology and Frozen Startup Profiles," *ASME Journal of Heat Transfer*, Vol. 113, No. 4, 1991, pp. 1003-1009.
52. **Faghri, A.** and Chow, L. C., "Annular Condensation Heat Transfer in a Microgravity Environment," *International Communications in Heat and Mass Transfer*, Vol. 18, No. 5, 1991, pp. 715-729.
53. Rose, M., Frank, Hyder, A. K., Askew, R. F., Chow, L. C., Gilmour, A. S., and **Faghri, A.**, "Novel Techniques for the Thermal Management of Space-Based, High-Power Microwave Tubes," *IEEE Transactions of Electronic Devices*, Vol. 38, No. 10, 1991, pp. 2252-2263.
54. Yerkes, K. and **Faghri, A.**, "Mixed Convection Analysis in Large Baffled Rectangular Chambers with Internal Heat Sources," *International Journal of Heat and Mass Transfer*, Vol. 35, No. 5, 1992, pp. 1209-1228.
55. Rahman, M. M. and **Faghri, A.**, "Numerical Simulation of Fluid Flow and Heat Transfer in a Thin Liquid Film Over a Rotating Disk," *International Journal of Heat and Mass Transfer*, Vol. 35, No. 6, 1992, pp. 1441-1453.
56. Cao, Y. and **Faghri, A.**, "Transient Multidimensional Analysis of Nonconventional Heat Pipes with Uniform and Nonuniform Heat Distribution," *ASME Journal of Heat Transfer*, Vol. 113, No. 4, 1992, pp. 995-1002.
57. Rahman, M. M., **Faghri, A.**, and Hankey, W L., "Fluid Flow and Heat Transfer in a Radially-Spreading Thin Liquid Film," *Journal of Numerical Heat Transfer*, Part A, Vol. 21, 1992, pp. 71-90.
58. Cao, Y. and **Faghri, A.**, "A Study of Thermal Energy Storage Systems with Conjugate Turbulent Forced Convection," *ASME Journal of Heat Transfer*, Vol. 114, No. 4, 1992, pp. 1019-1027.
59. Rahman, M. M. and **Faghri, A.**, "Analysis of Heating and Evaporation From a Liquid Film Adjacent to a Horizontal Rotating Disk," *International Journal of Heat and Mass Transfer*, Vol. 35, No. 10, 1992, pp. 2644-2655.
60. **Faghri, A.**, "Frozen Start-Up Behavior of Low Temperature Heat Pipes," *International Journal of Heat and Mass Transfer*, Vol. 35, No. 7, 1992, pp. 1681-1694.
61. Schutte, D., Rahman, M. M., and **Faghri, A.**, "Transient Conjugate Heat Transfer in a Thick-Walled Pipe with Developing Laminar Flow," *Numerical Heat Transfer*, Part A, Vol. 21, 1992, pp. 163-186.
62. Yerkes, K. L. and **Faghri, A.**, "Flow Visualization of Mixed Convection in Large Chambers With and Without Heat Sources," *International Communications in Heat and Mass Transfer*, Vol. 19, 1992, pp. 749-764.
63. Cao, Y. and **Faghri, A.**, "Closed-Form Analytical Solutions of High Temperature Heat Pipe Startup and the Frozen Startup Limitations," *ASME Journal of Heat Transfer*, Vol. 114, No. 4, 1992, pp. 1028-1035.
64. Rahman, M. M. and **Faghri, A.**, "Transport in a Thin Liquid Film on the Outer Surface of a Wedge or Cone Embedded in a Porous Medium, Part I: Mathematical Analysis," *International Communications in Heat and Mass Transfer*, Vol. 20, No. 1, 1993, pp. 15-27.
65. Schmalhofer, J. and **Faghri, A.**, "A Study of Circumferentially Heated and Block-Heated Heat Pipes, Part I: Experimental Analysis and Generalized Analytical Prediction of Capillary Limits," *International Journal of Heat and Mass Transfer*, Vol. 36, No. 1, 1993, pp. 201-212.
66. Schmalhofer, J. and **Faghri, A.**, "A Study of Circumferentially Heated and Block-Heated Heat Pipes, Part II: A Complete Three-Dimensional Numerical Modeling as a Conjugate Problem," *International Journal of Heat and Mass Transfer*, Vol. 36, No. 1, 1993, pp. 213-226.
67. Rahman, M. M. and **Faghri, A.**, "Gas Absorption and Solid Dissolution in a Thin Liquid Film on a Rotating Disk," *International Journal of Heat and Mass Transfer*, Vol. 36, No. 1, 1993, pp. 189-199.

68. Cao, Y. and **Faghri, A.**, "Simulation of the Early Startup Period of High Temperature Heat Pipes From the Frozen State by a Rarefied Vapor Self-Diffusion Model," *ASME Journal of Heat Transfer*, Vol. 115, No. 1, 1993, pp. 239-246.
69. **Faghri, A.**, Thomas, S., and Rahman, M. M., "Conjugate Heat Transfer From a Heated Disk to a Thin Liquid Film Formed by a Controlled Impinging Jet," *ASME Journal of Heat Transfer*, Vol. 115, No. 1, 1993, pp. 116-123.
70. Cao, Y. and **Faghri, A.**, "A Numerical Analysis of High Temperature Heat Pipe Startup From the Frozen State," *ASME Journal of Heat Transfer*, Vol. 115, No. 1, 1993, pp. 247-254.
71. **Faghri, A.**, Gogineni, S., and Thomas, S., "Vapor Flow Analysis in an Axially Rotating Heat Pipe," *International Journal of Heat and Mass Transfer*, Vol. 36, No. 9, 1993, pp. 2293-2303.
72. Cao, Y. and **Faghri, A.**, "Conjugate Modeling of High Temperature Nosecap and Wing Leading Edge Heat Pipes," *ASME Journal of Heat Transfer*, Vol. 115, No. 3, 1993, pp. 819-822.
73. Rahman, M. M. and **Faghri, A.**, "Transport in a Thin Liquid Film on the Outer Surface of a Wedge or Cone Embedded in a Porous Medium, Part II: Computation and Comparison of Results," *International Communications in Heat and Mass Transfer*, Vol. 20, No. 1, 1993, pp. 29-42.
74. McDonough, M. W. and **Faghri, A.**, "Ultrasonic Measurement of Solid-Liquid Interface for the Solidification of Water in a Rectangular Enclosure," *ASME Journal of Heat Transfer*, Vol. 115, No. 4, 1993, pp. 1075-1078.
75. McDonough, M. W. and **Faghri, A.**, "Ultrasonic Measurement of Interface Positions During the Solidification of an Aqueous Sodium Carbonate Solution Around a Vertical Cylinder," *Experimental Heat Transfer Journal*, Vol. 6, No. 3, 1993, pp. 215-230.
76. Khrustalev, D. and **Faghri, A.**, "Thermal Analysis of a Micro Heat Pipe," *ASME Journal of Heat Transfer*, Vol. 116, No. 1, 1994, pp. 189-198.
77. Cao, Y. and **Faghri, A.**, "Conjugate Analysis of a Flat-Plate Evaporator for Capillary Pumped Loops with Three-Dimensional Vapor Flow in the Groove," *International Journal of Heat and Mass Transfer*, Vol. 37, No. 3, 1994, pp. 401-409.
78. Zeng, X. and **Faghri, A.**, "Temperature-Transforming Model for Binary Solid-Liquid Phase Change Problems: Part I- Mathematical Modeling and Numerical Methodology," *Numerical Heat Transfer Part B- Fundamental*, Vol. 25, Issue 4, 1994, pp. 467-480.
79. Harley, C. and **Faghri, A.**, "Transient Two-Dimensional Gas-Loaded Heat Pipe Analysis," *ASME Journal of Heat Transfer*, Vol. 116, No. 3, 1994, pp. 716-723.
80. Zeng, X. and **Faghri, A.**, "Experimental and Numerical Study of Microwave Thawing Heat Transfer for Food Materials," *ASME Journal of Heat Transfer*, Vol. 116, No. 2, 1994, pp. 446-455.
81. McDonough, M. W. and **Faghri, A.**, "Experimental and Numerical Analysis of Natural Convection of Water Through its Density Maximum in a Rectangular Enclosure," *International Journal of Heat and Mass Transfer*, Vol. 37, Nov. 5, 1994, pp. 783-801.
82. Harley, C. and **Faghri, A.**, "Complete Transient Two-Dimensional Analysis of Two-Phase Closed Thermosyphons Including the Falling Condensate Film," *ASME Journal of Heat Transfer*, Vol. 116, No. 2, 1994, pp. 418-426.
83. **Faghri, A.** and Harley, C., "Transient Lumped Heat Pipe Analysis," *The Journal of Heat Recovery Systems & CHP*, Vol. 14, No. 4, 1994, pp. 351-363.

84. Cao, Y. and **Faghri, A.**, "Analytical Solution of Flow and Heat Transfer in a Porous Structure with Partial Heating and Evaporation on the Upper Surface," *International Journal of Heat and Mass Transfer*, Vol. 37, No. 10, 1994, pp. 1525-1533.
85. Zeng, X. and **Faghri, A.**, "A Temperature Transforming Model for Binary Solid-Liquid Phase Change Problems: Part II- Numerical Simulation," *Numerical Heat Transfer Part B- Fundamental*, Vol. 25, Issue 4, 1994, pp. 481-500.
86. Cao, Y. and **Faghri, A.**, "Micro/Miniature Heat Pipes and Operating Limitations," *Journal of Enhanced Heat Transfer*, Vol. 1, No. 3, 1994, pp. 265-274
87. **Faghri, A.**, "Recent Advances in Numerical Analysis of Heat Pipes," *Journal of Computational Mechanics*, Vol. 15, No. 5, 1994, pp. 480-491.
88. Harley, C. and **Faghri, A.**, "Two-Dimensional Rotating Heat Pipe Analysis," ASME *Journal of Heat Transfer*, Vol. 117, No. 1, 1995, pp. 202-208.
89. Khrustalev, D. and **Faghri, A.**, "Heat Transfer During Evaporation on Capillary-Grooved Heat Pipes," ASME *Journal of Heat Transfer*, Vol. 117, No. 3, 1995, pp. 740-747.
90. Khrustalev, D. and **Faghri, A.**, "Thermal Characteristics of Conventional and Flat Miniature Axially-Grooved Heat Pipes," ASME *Journal of Heat Transfer*, Vol. 117, No. 4, 1995, pp. 1048-1054.
91. Khrustalev, D. and **Faghri, A.**, "Heat Transfer in the Inverted Meniscus Type Evaporator at High Heat Fluxes," *International Journal of Heat and Mass Transfer*, Vol. 38, No. 16, 1995, pp. 3091-3101.
92. **Faghri, A.**, Gogineni, S., and Cao, Y., "Fluid Flow Analysis in an Axially Rotating Porous Pipe with Mass Injection at the Wall," *Numerical Heat Transfer Part A: Applications*, Vol. 28, No. 6, 1995, pp. 723-737.
93. Zhang, Y. and **Faghri, A.**, "Analysis of Thermal Energy Storage System with Conjugate Turbulent Forced Convection," AIAA *Journal of Thermophysics and Heat and Mass Transfer*, Vol. 9, No. 4, 1995, pp. 722-726.
94. Zhang, Y., and **Faghri, A.**, "Analysis of Forced Convection Heat Transfer in Microcapsulated Phase-Change Material Suspensions," AIAA *Journal of Thermophysics and Heat Transfer*, Vol. 9, No. 4, 1995, pp. 727-732.
95. Khrustalev, D. and **Faghri, A.**, "Estimation of the Maximum Heat Flow in the Inverted Meniscus Type Evaporator of the Flat Miniature Heat Pipe," *International Journal of Heat and Mass Transfer*, Vol. 39, No. 9, 1996, pp. 1899-1909.
96. Zhang, Y. and **Faghri, A.**, "Semi-Analytical Solution of Thermal Energy Storage System with Conjugate Laminar Forced Convection," *International Journal of Heat and Mass Transfer*, Vol. 39, No. 4, 1996, pp. 717-724.
97. Khrustalev, D. and **Faghri, A.**, "High Flux Evaporative Mini-Channel Heat Sink With Axial Capillary Grooves," *Journal of Enhanced Heat Transfer*, Vol. 3, No. 3, 1996, pp. 221-232
98. Khrustalev, D., and **Faghri, A.**, "Enhanced Flat Miniature Axially Grooved Heat Pipe," ASME *Journal of Heat Transfer*, Vol. 118, No. 1, 1996, pp. 261-264.
99. Zhang Y., and **Faghri, A.**, "Heat Transfer Enhancement in Latent Heat Thermal Energy Storage System by Using External Radial Finned Tubes," *Journal of Enhanced Heat Transfer*, Vol. 3, No. 2, 1996, pp. 119-127.
100. Zhang, Y., and **Faghri, A.**, "Heat Transfer Enhancement in Latent Heat Thermal Energy Storage System by Using the Internally Finned Tube," *International Journal of Heat & Mass Transfer*, Vol. 39, No. 15, 1996, pp. 3165-3173.

101. Zhang, Y., and **Faghri, A.**, "An Internal Approximate Solution of Heat Transfer in the Grinding Process," *International Journal of Heat & Mass Transfer*, Vol. 39, No. 13, 1996, pp. 2653-2662.
102. Khrustalev, D., and **Faghri, A.**, "Fluid Flow Effects in Evaporation from Liquid/Vapor Meniscus," *ASME Journal of Heat Transfer*, Vol. 118, 1996, pp. 725-730.
103. Khrustalev, D., and **Faghri, A.**, "Boiling Heat Transfer in the Miniature Axially-Grooved Rectangular Channel With Discrete Heat Sources," *Journal of Enhanced Heat Transfer*, Vol. 4, No. 3, 1997, pp. 163-174.
104. Zhang, Y., Chen, Z., and **Faghri, A.**, "Heat Transfer During Solidification Around a Horizontal Tube With Internal Convection Cooling," *ASME Journal of Solar Energy Engineering*, Vol. 119, No. 1, 1997, pp. 44-47.
105. **Faghri, A.**, "Recent Advances in Heat Pipe Analysis and Simulation," *Annual Review of Heat Transfer*, Volume 8 (ARHT-VIII), 1997.
106. **Faghri, A.**, "Heat Sink with Microchannels: Heat Transfer & Fluid Flow," Subsection, pp. 188-191, in *1997 McGraw-Hill Yearbook of Science & Technology*, 1997.
107. Zhang, Y., and **Faghri, A.**, "Analysis of Freezing in an Eccentric Annulus," *ASME Journal of Solar Energy Engineering*, Vol. 119, No. 3, 1997, pp. 237-241.
108. Ganesh, R. K., **Faghri, A.**, and Hahn, Y., "A Generalized Thermal Modeling for Laser Drilling Process, Part 1: Mathematical Modeling and Numerical Methodology," *International Journal of Heat and Mass Transfer*, Vol. 40, No. 14, 1997, pp. 3351-3360.
109. Ganesh, R. K., **Faghri, A.**, and Hahn, Y., "A Generalized Thermal Modeling for Laser Drilling Process, Part 2: Numerical Simulation and Results," *International Journal of Heat and Mass Transfer*, Vol. 40, No. 14, 1997, pp. 3361-3373.
110. Lin, L., and **Faghri, A.**, "Heat Transfer Analysis of Stratified Flow in Rotating Heat Pipes with Cylindrical and Stepped Walls," *International Journal of Heat and Mass Transfer*, Vol. 40, No. 18, 1997, pp. 4393-4404.
111. **Faghri, A.**, and Khrustalev, D., "Advances in Modeling of Enhanced Flat Miniature Heat Pipes with Capillary Grooves," *Journal of Enhanced Heat Transfer*, Vol. 4, 1997, pp. 99-109.
112. Zuo, Z. J., and **Faghri, A.**, "A Boundary Element Approach to Transient Heat Pipe Analysis," *Numerical Heat Transfer*, Vol. 33, No. 3, 1997, pp. 205-220.
113. Khrustalev, D., and **Faghri, A.**, "Thick Film Phenomenon in High Heat Flux Evaporation from Cylindrical Pores," *ASME Journal of Heat Transfer*, Vol. 119, No. 2, 1997, pp. 272-278.
114. Lin, L., and **Faghri, A.**, "Steady-State Performances in a Thermosyphon with Tube Separator," *Journal of Applied Thermal Engineering*, Vol. 17, No. 7, 1997, pp. 667-679.
115. Lin, L., and **Faghri, A.**, "Steady-State Performance of a Rotating Miniature Heat Pipe," *AIAA Journal of Thermophysics and Heat Transfer*, Vol. 11, No. 4, 1997, pp. 513-518.
116. Zhang, Y., and **Faghri, A.**, "A Thermal Analysis for Mushy Zone Formation in Binary Solutions," *ASME Journal of Solar Energy Engineering*, Vol. 120, No. 7, 1998, pp. 144-147.
117. Zuo, Z. J., **Faghri, A.**, and Langston, L., "Numerical Analysis of Heat Pipe Turbine Vane Cooling," *ASME Journal of Engineering for Gas Turbines & Power*, Vol. 120, 1998, pp. 735-743.
118. Lin, L., and **Faghri, A.**, "An Analysis of Two-Phase Flow Stability in a Thermosyphon with Tube Separator," *Journal of Applied Thermal Engineering*, Vol. 18, No. 6, 1998, pp. 441-451.

119. Zuo, Z. J., and **Faghri, A.**, "A Network Thermodynamic Analysis of the Heat Pipe," *International Journal of Heat and Mass Transfer*, Vol. 14, No. 11, 1998, pp. 1473-1484.
120. Lin, L., and **Faghri, A.**, "Condensation in a Rotating Stepped Wall Heat Pipe with Hysteretic Annular Flow," *AIAA Journal of Thermophysics and Heat Transfer*, Vol. 12, No. 1, 1998, pp. 94-99.
121. Zhang, Y., and **Faghri, A.**, "Melting and Resolidification of a Subcooled Mixed Powder with Moving Gaussian Heat Source," *ASME Journal of Heat Transfer*, Vol. 120, No. 4, 1998, pp. 883-891.
122. Khalkhali, H., **Faghri, A.**, and Zuo, Z., "Entropy Generation in Heat Pipe Systems," *Applied Thermal Engineering*, Vol. 19, 1999, pp. 1027-1043.
123. Hopkins, R., **Faghri, A.**, and Khrustalev, D., "Critical Heat Fluxes In Flat Miniature Heat Sinks With Micro-Capillary Grooves," *ASME Journal of Heat Transfer*, Vol. 121, No. 1, 1999, pp. 217-220.
124. Hopkins, R., **Faghri, A.**, and Khrustalev, D., "Flat Miniature Heat Pipes With Micro-Capillary Grooves," *ASME Journal of Heat Transfer*, Vol. 121, No. 1, 1999, pp. 102-109.
125. Zhang, Y., and **Faghri, A.**, "Vaporization, Melting and Heat Conduction in the Laser Drilling Process," *International Journal of Heat and Mass Transfer*, Vol. 42, No. 10, 1999, pp. 1775-1790.
126. Zhang, Y., and **Faghri, A.**, "Melting of a Subcooled Mixed Powder Bed with Constant Heat Flux Heating," *International Journal of Heat and Mass Transfer*, Vol. 42, No. 5, 1999, pp. 775-788.
127. Lin, Lanchao, and **Faghri, A.**, "Heat Transfer in the Micro Region of a Rotating Miniature Heat Pipe," *International Journal of Heat and Mass Transfer*, Vol. 42, 1999, pp. 1363-1369.
128. Khrustalev, D., and **Faghri, A.**, "Coupled Liquid and Vapor Flow In Miniature Passages with Micro Grooves," *ASME Journal of Heat Transfer*, Vol. 121, No. 3, 1999, 729-733.
129. Begg, E., Khrustalev, D., and **Faghri, A.**, "Complete Condensation of Forced Convection Two-Phase Flow in a Miniature Tube," *ASME Journal of Heat Transfer*, Vol. 121, No. 4, 1999, pp. 904-915.
130. Zhang, Y. and **Faghri, A.**, "Thermal Modeling of Selective Area Laser Deposition of Titanium Nitride on a Finite Slab with Stationary and Moving Laser Beams," *International Journal of Heat and Mass Transfer*, Vol. 43, No. 20, 2000, pp. 3835-3846.
131. Zhang, Y., **Faghri, A.**, Buckley, C. W., and Bergman, T., "Three Dimensional Sintering of Two Component Metal Powders with Stationary and Moving Laser Beams," *ASME Journal of Heat Transfer*, Vol. 122, No. 1, 2000, pp. 150-158.
132. **Faghri, A.**, Dhir, V., and Jaluria, Y., "Comments on a Recent Review of Incropera and DeWitt's Text," *International Journal of Heat and Mass Transfer*, Vol. 43, 2000, pp. 162-163.
133. Zhang, Y., **Faghri, A.**, and Shafii, M., "Capillary Blocking in Forced Convective Condensation in Horizontal Miniature Channels," *ASME Journal of Heat Transfer*, Vol. 123, No. 3, 2001, pp. 501-511.
134. **Faghri, A.**, "Advances and Challenges in Micro/Miniature Heat Pipes," *Annual Review of Heat Transfer*, Vol. 12, 2001, pp. 1-26.
135. Zhang, Y., and **Faghri, A.**, "Numerical Simulation of Condensation on a Capillary Grooved Structure," *Numerical Heat Transfer, Part A*, Vol. 39, 2001, No. 3, pp. 227-243.

136. Tabatabai, Ahmadali and **Faghri, A.**, "A New Two-Phase Flow Map and Transition Boundary Accounting for Surface Tension Effect in Horizontal Miniature and Micro Tubes," *ASME Journal of Heat Transfer*, Vol. 123, No. 5, 2001, pp. 958-968.
137. Shafii, M. B., **Faghri, A.**, and Zhang, Y., "Thermal Modeling of Unlooped and Looped Pulsating Heat Pipes," *ASME Journal of Heat Transfer*, Vol. 123, No. 6, 2001, pp. 1159-1172.
138. Zhang, Y., and **Faghri, A.**, "Heat Transfer in a Pulsating Heat Pipe with Open End," *International Journal of Heat and Mass Transfer*, Vol. 45, No. 4, 2002, pp. 755-764.
139. Zhang, Y., **Faghri, A.**, and Shafii, M. B., "Analysis of Liquid-Vapor Pulsating Flow in an U-Shaped Miniature Tube," *International Journal of Heat and Mass Transfer*, Vol. 45, No. 12, 2002, pp. 2501-2508.
140. Shafii, M. B., **Faghri, A.**, and Zhang, Y., "Analysis of Heat Transfer in Unlooped and Looped Pulsating Heat Pipes," *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 12, No. 5, 2002, pp. 585-609.
141. Ozar, B., Cetegen, B. M., and **Faghri, A.**, "Experiments on the Flow of a Thin Liquid Film over a Horizontal Stationary and Rotating Disk Surface," *Experiments in Fluids*, Vol. 34, 2003, pp. 556-565.
142. Begg, E., Holley, B., and **Faghri, A.**, "Condensation Heat Transfer and Pressure Drop Measurements in Miniature Horizontal Tubes with Low Mass Flux Rates," *Journal of Enhanced Heat Transfer*, Vol 10, No. 3, 2003, pp. 335-353
143. Zhang, Y., and **Faghri, A.**, "Oscillatory Flow in Pulsating Heat Pipes with Arbitrary Number of Turns," *AIAA Journal of Thermophysics and Heat Transfer*, Vol. 17, No. 3, 2003, pp. 340-347.
144. Ozar, B., Cetegen, B. M., and **Faghri A.**, "Experiments on Heat Transfer in a Thin Liquid Film Flowing over a Rotating Disk," *ASME Journal of Heat Transfer*, Vol. 126, No. 2, 2004, pp. 184-192.
145. **Faghri, A.**, and Guo, Z., "Challenges and Opportunities of Thermal Management Issues Related to Fuel Cell Technology and Modeling," *International Journal of Heat & Mass Transfer*, Vol. 48, Issue 19/20, 2005, pp 3891-3920.
146. Rice, J., **Faghri, A.**, and Cetegen, B., "Analysis of a Free Surface Film from a Controlled Liquid Impinging Jet over a Rotating Disk Including Conjugate Effects, With and Without Evaporation," *International Journal of Heat and Mass Transfer*, Vol. 48, 2005, pp. 5192-5204.
147. Holley, B., and **Faghri, A.**, "Pulsating Heat Pipe with Capillary Wick and Varying Channel Diameter," *International Journal of Heat and Mass Transfer*, Vol. 48, No. 13, 2005, pp. 2635-2651.
148. **Faghri, A.**, "Unresolved Issues in Fuel Cell Modeling", *Heat Transfer Engineering*, Vol. 27, No. 1, 2006, pp. 1-3.
149. Holley, B., and **Faghri, A.**, "Permeability and Effective Pore Radius Measurements for Heat Pipe and Fuel Cell Applications," *Journal of Applied Thermal Engineering*, Vol. 26, No. 4, 2006, pp. 448-462.
150. Rice, J., and **Faghri, A.**, "A New Computational Method for Free Surface Problems," *Numerical Heat Transfer*, Vol. 49, No. 5, 2006, pp. 409-436.
151. Rice, J. and **Faghri, A.**, "Analysis of Porous Wick Heat Pipes, Including Capillary Dry-out Limitations," submitted to *AIAA Journal of Thermophysics and Heat Transfer*, 2006.
152. Rice J., and **Faghri, A.**, "A New Computational Method to Track a Liquid/Vapor Interface, with Mass Transfer, Demonstrated on the Concentration Driven Evaporation from a Capillary Tube, and the Marangoni Effect," submitted to *Numerical Heat Transfer*, 2006.

153. Guo, Z., and **Faghri, A.**, "Development of Planar Air-Breathing Direct Methanol Fuel Cell Stacks," *Journal of Power Sources*, 2006 (in press).
154. Guo, Z. and **Faghri, A.**, "Thermal Behavior of a Novel Micro Fuel Cell Based Methanol Concentration Sensor," submitted to *Journal of Electrochemical Society*, February 2006.
155. Rice, J. and **Faghri, A.**, "A Transient, Multi-phase and Multi-Component Model of a New Passive Miniature DMFC," submitted to *International Journal of Heat and Mass Transfer*, 2006.
156. Guo, Z., and **Faghri, A.**, "Miniature DMFCs with Passive Thermal Fluids Management System", *Journal of Power Sources*, 2006 (in press).

CONFERENCE PROCEEDINGS

1. **Faghri, A.**, "Heat Transfer to Wavy Liquid Film on Vertical Surface," proceedings of *AIAA 12th Thermophysics Conference*, 1977.
2. **Faghri, A.**, "Transport to Wavy Liquid Films Running Down a Vertical Surface," *1978 Physico Chemical Hydrodynamics Conference*, 1978.
3. **Faghri, A.**, "Prediction of Transport Properties of Liquids," proceedings of the *Sixth National Heat and Mass Transfer Conference*, Indian Institute of Technology, Madras, India, December 1981, pp. G19-28.
4. **Faghri, A.**, "Turbulent Film Condensation in a Tube with Counter Current Vapor Flow," proceedings of *3rd Multi-Phase Flow and Heat Transfer Symposium*, April 1983.
5. **Faghri, A.**, "Prediction of Heat and Mass Transfer for Absorption of a Gas to a Liquid Film," proceedings of the *3rd International Conference on Numerical Methods on Thermal Problems*, August 2-5, 1983, pp. 981-990.
6. **Faghri, A.**, Stewart, R. J., and Rainey, C. L., "Axial Variation of Local Heat Flux Along the Condenser Section of a Double-Wall Artery High Capacity Heat Pipe," proceedings of the *5th International Heat Pipe Conference*, Tsukuba, Japan, 1984.
7. **Faghri, A.**, "Turbulent Film Condensation in a Tube with Concurrent and Countercurrent Vapor Flow," AIAA Paper No. 86-1354, 1986.
8. **Faghri, A.**, "Performance Characteristics of the Double-Walled Concentric Heat Pipe," proceedings of the *6th International Heat Pipe Conference*, Grenoble, France, May 1987, pp. 203-210.
9. **Faghri, A.**, and Chow, L. C., "Annular Condensation Heat Transfer in a Microgravity Environment," AIAA Paper 87-1533, June 1987.
10. **Faghri, A.**, "Condenser Performance of an Axially-Grooved Heat Pipe," proceedings of the *6th International Heat Pipe Conference*, Grenoble, France, May 1987, pp. 142-145.
11. **Faghri, A.**, "An Analysis of the Effects of Vapor Pressure Drop on the Performance of the Double-Walled Concentric Heat Pipe," proceedings of the *6th International Heat Pipe Conference*, France, May 1987, pp. 211-218.
12. **Faghri, A.**, "Laminar Heat and Mass Transfer Characteristics in Annular Porous Passages," proceedings of the *1987 ASME/AIChE National Heat Transfer Conference*, ASME Paper No. 87-HT-27.
13. **Faghri, A.**, "Heat Transfer Characteristics of Laminar Flow in Annuli with Suction or Blowing and Constant Heat Flux at the Walls," proceedings of the *Numerical Methods in Heat Transfer at ASME Winter Annual Meeting*, ASME HTD-Vol. 88, December 1987, pp. 43-50.
14. **Faghri, A.**, Reynolds, D., and Najafi, P., "An Innovative Method for Hand Protection from Extreme Cold Using Heat Pipe Technology," proceedings of the *Network Thermodynamics Heat and Mass Transfer in Biotechnology at ASME Winter Annual Meeting*, December 1987, pp. 87-93.
15. **Faghri, A.**, and Parvani, S., "Numerical Analysis of Laminar Flow in a Double-Walled Annular Heat Pipe," AIAA Paper 87-1617, June 1987.
16. **Faghri, A.**, and Chow, L. C., "Forced Condensation in a Tube with Suction at the Wall for Microgravitational Applications," proceedings of the *1987 ASME National Heat Transfer Conference*, ASME HTD-Vol. 83, pp. 71-75, 1987.

17. **Faghri, A.**, Chen, M. M., and Morgan, M., "Heat Transfer Characteristics in Two-Phase Closed Conventional and Concentric Annular Thermosyphons," proceedings of the 1988 ASME National Heat Transfer Conference, ASME HTD 96, Vol. 1, pp. 291-303, July 1988.
18. **Faghri, A.**, and Thomas, S., "Performance Characteristics of a Concentric Annular Heat Pipe, Part I, Experimental Prediction and Analysis of the Capillary Limit," proceedings of the 1988 ASME National Heat Transfer Conference, ASME HTD 96, Vol. 1, pp. 379-387, July 1988.
19. **Faghri, A.**, "Performance Characteristics of a Concentric Annular Heat Pipe, Part II, Vapor Flow Analysis," proceedings of the 1988 ASME National Heat Transfer Conference, ASME HTD 96, Vol. 1, pp. 389-396, July 1988.
20. Cao, Y., and **Faghri, A.**, "A Temperature Transforming Model with a Fixed Grid Numerical Methodology for Phase-Change Problems Including Natural Convection," *Multiphase Flow, Heat and Mass Transfer*, ASME HTD-Vol. 109, pp. 45-53. 1989.
21. Thomas, S., Hankey, W., and **Faghri, A.**, "An Analysis of the Vapor Flow and the Heat Conduction Through the Liquid-Wick and Pipe Wall in a Heat Pipe with Single or Multiple Heat Sources," proceedings of the 1989 ASME National Heat Transfer Conference, ASME Paper No. 89-HT-12, 1989.
22. Thomas, S., Hankey, W., **Faghri, A.**, and Swanson, T., "One-Dimensional Analysis of Plane and Radial Thin Film Flows Including Solid-Body Rotation," *Numerical Heat Transfer With Personal Computers and Supercomputing*, ASME HTD-Vol. 110, pp. 103-111, 1989.
23. Rahman, M. M., **Faghri, A.**, and Hankey W. L., "New Methodology for the Computation of Free Surface Flows Using a Permeable Wall," *Porous Media Mixtures and Multiphase Heat Transfer*, ASME HTD-Vol. 117, pp. 31-38, 1989.
24. Jang, J. H., **Faghri, A.**, Chang, W. S., and Mahefkey, E. T., "Mathematical Modeling and Analysis of Heat Pipe Start-Up From the Frozen State," *Heat Transfer with Phase Change*, ASME HTD-Vol. 114, pp. 11-24, 1989.
25. Jang, J., **Faghri, A.**, and Chang, W. S., "Analysis of the Transient Compressible Vapor Flow in Heat Pipes," *Numerical Heat Transfer with Personal Computers and Supercomputer*, ASME HTD-Vol. 110, pp. 113-120, 1989.
26. Yerkes, K. L., and **Faghri, A.**, "An Experimental and Numerical Simulation of Mixed Convection in Large Baffled Rectangular Chamber," *Natural Circulation in Single-Phase and Two-Phase Flow*, ASME HTD-Vol. 115, pp. 23-24.
27. Rahman, M. M., **Faghri, A.**, Hankey, W. L., and Swanson, T. D., "Heat Transfer to a Thin Liquid Film With a Free Surface," *Numerical Heat Transfer with Personal Computers and Supercomputing*, ASME HTD-Vol. 110, pp. 161-168, 1989.
28. Rahman, M. M., **Faghri, A.**, and Hankey, W. L., "Computation of Turbulent Flow in a Thin Liquid Layer of Fluid Involving a Hydraulic Jump," *Heat Transfer in Turbulent Flow*, ASME HTD-Vol.138, pp. 71-80, 1990.
29. Yerkes, K., and **Faghri, A.**, "Mixed Convection Analysis in Large Baffled Rectangular Chambers with Internal Heat Sources," *Fundamentals of Natural Convections*, ASME HTD-Vol. 140, pp. 9-17, 1990.
30. Thomas, S., **Faghri, A.**, and Hankey, W. L., "The Flow of a Thin Liquid Film on a Stationary and Rotating Disk, Part I: Experimental Analysis and Flow Visualization," *Heat Transfer in Space Systems*, ASME HTD, Vol. 135, pp. 125-134, 1990.
31. Rahman, M. M., **Faghri, A.**, and Hankey, W. L., "The Flow of a Thin Liquid Film on a Stationary and Rotating Disk, Part II: Theoretical Prediction," *Heat Transfer in Space Systems*, ASME HTD-Vol. 135, pp. 135-142, 1990.

32. Cao, Y., **Faghri, A.**, and Juhasz, A., "A PCM/Forced Convection Conjugate Transient Analysis of Energy Storage Systems with Annular and Counter-Current Flows," *Phase Change and Convective Heat Transfer*, ASME HTD-Vol. 129, pp. 63-69, 1990.
33. **Faghri, A.**, Cao, Y., and Juhasz, A., "Transient Analysis of Heat Pipes," proceedings of *7th International Heat Pipe Conference*, Minsk, USSR, 1990.
34. **Faghri, A.**, and Buchko, M., "Experimental and Numerical Analysis of Low Temperature Heat Pipes With Multiple Heat Sources," *Heat Transfer and Flow in Porous Media*, ASME HTD-Vol. 156, pp. 51-58, 1990.
35. **Faghri, A.**, "Frozen Start-Up Behavior of a Low Temperature Heat Pipe," proceedings of *1991 ASME/AIChE Nation Heat Transfer Conference*, July 28-31, 1991.
36. Schutte, D., Rahman, M. M., and **Faghri, A.**, "Transient Conjugate Heat Transfer in a Thick-Walled Pipe with Developing Laminar Flow," *Heat Transfer in Unsteady Flows*, ASME HTD-Vol. 158, 1991.
37. **Faghri, A.**, Buchko, M., and Cao, Y., "A Study of High Temperature Heat Pipes with Multiple Heat Sources and Sinks, Part I: Experimental Methodology and Frozen Startup Profiles," proceedings of *1991 ASME/AIChE Nation Heat Transfer Conference*, July 28-31, 1991, ASME91-HT-36.
38. **Faghri, A.**, Buchko, M., and Cao, Y., "A Study of High Temperature Heat Pipes with Multiple Heat Sources and Sinks, Part II: Analysis of Continuum Transient and Steady State Experimental Data with Numerical Predictions," proceedings of *1991 ASME/AIChE National Heat Transfer Conference*, July 28-31, 1991, ASME 91-HT-37.
39. Rahman, M. M., and **Faghri, A.**, "Evaporation, heating, Solid, Dissolution, and Gas Absorption in a Thin Liquid Film on the Outer Surface of a Wedge of Cone Embedded in a Porous Medium," proceedings of *1991 ASME/JSME Conference*, Reno, March 1991.
40. Schmalhofer, J., and **Faghri, A.**, "A Study of Circumferentially Heated and Block-Heated Heat Pipes, Part I: Experimental Analysis and Generalized Analytical Prediction of Capillary Limits," *Heat Transfer Enhancement in Electronic Cooling*, ASME HTD-Vol. 183, pp. 41-48, December 1991.
41. Schmalhofer, J., and **Faghri, A.**, "A Study of Circumferentially Heated and Block-Heated Heat Pipes, Part II: Three-Dimensional Numerical Modeling as a Conjugate Problem," *Heat Transfer Enhancement in Electronic Cooling*, ASME HTD-Vol. 183, pp. 49-57, December 1991.
42. Cao, Y., **Faghri, A.**, and Chang, W., "Transient Analysis of Nonconventional Heat Pipes," *Fundamentals of Forced Convection Heat Transfer*, ASME HTD-Vol. 181, pp. 1-8, December 1991.
43. Cao, Y., and **Faghri, A.**, "A Study of Thermal Energy Storage Systems With Conjugate Turbulent Forced Convection," *Fundamentals of Forced and Mixed Convection and Transport Phenomenon*, ASME HTD-Vol. 180, pp. 1-10, December 1991.
44. **Faghri, A.**, Thomas, S., and Rahman, M. M., "Local Convective Heat Transfer From a Heated Disk to a Controlled Impinging Liquid Jet," proceedings of General Papers Session at the *1992 ASME National Heat Transfer Conference*, ASME HTD-Vol. 204, pp. 155-163, August 1992.
45. Rahman, M. M., and **Faghri, A.**, "Analysis of Heat and Evaporation From a Liquid Film Adjacent to a Horizontal Rotating Disk," proceedings of the *1992 ASME National Heat Transfer Conference*, ASME HTD-Vol. 206-3, pp. 47-55, San Diego, August 1992.

46. Cao, Y., and **Faghri, A.**, "Simulation of the Early Startup Period of High Temperature Heat Pipes From the Frozen State by a Rarefied Vapor Self-Diffusion Model," proceedings of the Microgravity Heat Transfer and Fluid Dynamics Sessions at the *1992 ASME National Heat Transfer Conference*, ASME HTD-Vol. 206-3, pp. 21-27, August 1992.
47. Cao, Y., and **Faghri, A.**, "Analyses of High Temperature Heat Pipe Startup From the Frozen State, Part I: Numerical Simulation," proceedings of the Heat Pipe Session at the *1992 ASME National Heat Transfer Conference*, ASME HTD-Vol. 206-3, 89-97, San Diego, August 1992.
48. Cao, Y., and **Faghri, A.**, "Analyses of High Temperature Heat Pipe Startup From the Frozen State, Part II: Closed-Form Analytical Solutions and Frozen Startup Limitation," proceedings of the Heat Pipe Session at the *1992 ASME National Heat Transfer Conference*, ASME HTD-Vol. 206-3, pp. 105-113, San Diego, August 1992.
49. **Faghri, A.**, "State of the Art of Numerical Analysis of Heat Pipes," proceedings of the *8th International Heat Pipe Conference*, September 14-18, 1992, Beijing, China.
50. **Faghri, A.**, and Beam, J., "Heat Pipe Startup From the Frozen State," proceedings of the *8th International Heat Pipe Conference*, September 14-18, 1992, Beijing, China.
51. **Faghri, A.**, and Cao, Y., "Numerical Analysis of Leading Edge and Nosecap Heat Pipes," proceedings of the *8th International Heat Pipe Conference*, September 14-18, 1992, Beijing, China.
52. Rahman, M. M., and **Faghri, A.**, "Mass Transfer to a Thin Liquid Film on a Rotating Disk," proceedings of the *1992 ASME Winter Annual Meeting*, ASME HTD-Vol. 212, pp. 87-93, November, 1992.
53. Cao, Y., and **Faghri, A.**, "Analysis of Transient and Steady-State Performances of Nosecap and Wing Leading Edge Heat Pipes," proceedings of the *ASME Winter Annual Meeting*, ASME HTD-Vol. 221, pp. 43-52, November 1992.
54. **Faghri, A.**, Gogineni, S. R., and Thomas, S., "Numerical Analysis of Vapor Flow in an Axially Rotating Heat Pipe," proceedings of the *1992 ASME Winter Annual Meeting*, ASME HTD-Vol. 221, pp. 11-21, November 1992.
55. Yerkes, K. L., and **Faghri, A.**, "Flow Visualization of Mixed Convection in Large Baffled Rectangular Chambers With and Without Internal Heat Sources," proceedings of the *ASME European Joint Conference on Engineering Systems Design and Analysis*, PD-Vol. 47-3, pp. 35-40, June 29-July 3, 1992, Istanbul, Turkey.
56. McDonough, M. W., and **Faghri, A.**, "Ultrasonic Measurement of Solid Liquid Interface for the Solidification of Water in a Rectangular Enclosure," proceedings of the *1993 National Heat Transfer Conference*, Atlanta, Georgia, ASME 93-HT-31.
57. Zeng, X., and **Faghri, A.**, "Experimental and Numerical Study of Microwave Thawing Heat Transfer for Food Materials," ASME HTD-Vol. 254, pp. 45-55, proceedings of the *1993 Heat Transfer Conference*, Atlanta, Georgia, August 1993.
58. Zeng, X., and **Faghri, A.**, "A Temperature Transforming Model with a Fixed Grid Numerical Methodology for Binary Solid-Liquid Phase Change Problems," ASME HTD-Vol. 234, pp. 43-57, proceedings of the *1993 National Heat Transfer Conference*, Atlanta, Georgia, August 1993.
59. **Faghri, A.**, "Recent Advances in the Numerical Analysis of Heat Pipes," proceedings of the *International Congress on Computational Methods in Engineering*, May 1993, Shiraz, Iran.
60. Cao, Y., **Faghri, A.**, and Mahefkey, E. T., "Micro/Miniature Heat Pipes and Operating Limitations," ASME HTD-Vol. 236, pp. 55-62, proceedings of the *1993 National Heat Transfer Conference*, Atlanta, Georgia, August 1993.

61. Khrustalev, D., and **Faghri, A.**, "Thermal Analysis of a Micro Heat Pipe," ASME HTD-Vol. 236, pp. 19-30, proceedings of the *1993 National Heat Transfer Conference*, Atlanta, Georgia, August 1993.
62. McDonough, M. W., and **Faghri, A.**, "Ultrasonic Measurement of Interface Positions During the Solidification of an Aqueous Sodium Carbonate Solution Around a Vertical Cylinder," proceedings of the *28th AIAA Thermophysics Conference*, AIAA-93-2830, Orlando, Florida, July 1993.
63. Harley, C., and **Faghri, A.**, "Transient Two-Dimensional Analysis of Thermosyphons Including the Falling Condensation Film," proceedings of the *1993 ASME Winter Annual Meeting*, ASME-93-WA/HT-17, New Orleans, Louisiana.
64. Harley, C., and **Faghri, A.**, "Transient Two-Dimensional Gas-Loaded Heat Pipe Analysis," proceedings of the *1993 ASME Winter Annual Meeting*, ASME-93-WA/HT-32, New Orleans, Louisiana.
65. Harley, C., and **Faghri, A.**, "Transient Gas-Loaded Thermosyphon Analysis," proceedings of the *10th International Heat Transfer Conference*, Brighton, England, August 14-18, 1994.
66. Khrustalev, D., **Faghri, A.**, and Leland, J., "Thermal Analysis of Axially-Grooved Heat Pipe," proceedings of the *Second Biennial ASME European Joint Conference on Engineering Systems, Design, and Analysis*, PD-Vol. 64-1, pp. 39-54, London, England, July 4-7, 1994.
67. Khrustalev, D., and **Faghri, A.**, "Heat Transfer During Evaporation and Condensation on Capillary-Grooved Structure of Heat Pipes," proceedings of the *1994 Winter Annual ASME Meeting*, ASME HTD-Vol. 287 in *Advances in Enhanced Heat Transfer*, November 13-18, 1994.
68. Khrustalev, D., and **Faghri, A.**, "Thermal Characteristics of Conventional and Flat Miniature Axially Grooved Heat Pipes," proceedings of the *1995 National Heat Transfer Conference*, ASME HTD-Vol. 307.
69. Khrustalev, D., and **Faghri, A.**, "Boiling Heat Transfer in the Miniature Axially-Grooved Rectangular Channel with Discrete Heat Sources," proceedings of the *1995 National Heat Transfer Conference*, ASME HTD-Vol. 305.
70. Harley, C., and **Faghri, A.**, "Analysis of Two-Dimensional Transient Gas Loaded Rotating Heat Pipe," proceedings of the *1995 International ASME Mechanical Engineering Congress*, ASME HTD-Vol. 317-1, pp. 201-211.
71. **Faghri, A.**, "Recent Advances and Challenges in Heat Pipe Science & Technology," proceedings of the *9th International Heat Pipe Conference*, Albuquerque, New Mexico, May 1-5, 1995.
72. **Faghri, A.**, and Khrustalev, D., "Advances in Modeling of Miniature Axially-Grooved Heat Pipes," *Symposium on Thermal Science and Engineering in Honor of Chancellor Chang-Lin Tien at University of California, Berkeley*, November 14, 1995.
73. Langston, L., and **Faghri, A.**, "Heat Pipe Turbine Van Cooling," Presented at the U.S. Department of Energy, Morgantown Energy Technology Center, 1995
74. Khrustalev, D., and **Faghri, A.**, "Fluid Flow Effects in Evaporation from Liquid/Vapor Meniscus," proceedings of the *1996 National Heat Transfer Conference*, Houston, Texas.
75. Zhang, Y., and **Faghri, A.**, "Analysis of Freezing in an Eccentric Annulus," proceedings of the *1996 ASME International Mechanical Engineering Congress and Exposition*, Atlanta, Georgia, November 17-22, 1996.
76. Khalkhali, H., **Faghri, A.**, and Zuo, Z., "Entropy Generation in Heat Pipe System," proceedings of the *1996 ASME International Congress and Exposition*.

77. Zuo, Z. J., **Faghri, A.**, and Langston, L., "Numerical Analysis of Heat Pipe Turbine Vane Cooling," proceedings of the *1996 Third Biennial ASME European Joint Conference on Engineering System Design and Analysis*, ASME PD Vol. 78, No. 6, Montpellier, France, July 1-4, 1996,
78. **Faghri, A.**, and Khrustalev, D., "Evaporation on/in Capillary Structures of High Heat Flux Two-Phase Devices," proceedings of the *NASA Microgravity Workshop*, 1996.
79. **Faghri, A.**, "Heat Pipe Simulation: From Promise to Reality," proceedings of the *5th International Heat Pipe Symposium*, November 17-20, 1996, Melbourne, Australia.
80. Hopkins, R., **Faghri, A.**, and Khrustalev, D., "Flat Miniature Heat Pipes with Micro Grooves," proceedings of the *1997 ASME National Heat Transfer Conference*, HTD-Vol. 349, Volume 11, pp. 71-80.
81. Zuo, Z. J., **Faghri, A.**, and Langston, L., "A Parametric Study of Heat Pipe Turbine Vane Cooling, Proceedings of the *Turbo Expo '97*, Orlando, Florida, June 2-5, 1997.
82. Hopkins, R., **Faghri, A.**, and Khrustalev, D., "Critical Heat Fluxes and Pressure Drops in Flat Miniature Heat Sinks with Micro Grooves," proceedings of *1997 ASME National Heat Transfer Conference*, HTD-Vol. 349, Volume 11, pp. 61-70.
83. Lin, L., and **Faghri, A.**, "Steady State Performance of a Rotating Miniature Heat Pipe," proceedings of *IECEC-97* July 27, 1997 to August 1, 1997, Honolulu, Hawaii.
84. Lin, L., and **Faghri, A.**, "Condensation Heat Transfer Regarding Hysteretic Annular Flow in a Rotating Stepped Wall Heat Pipe," proceedings of *IECEC-97* July 27, 1997 to August 1, 1997, Honolulu, Hawaii.
85. Khrustalev, D., and **Faghri, A.**, "Coupled Liquid and Vapor Flow in Miniature Passages with Micro Grooves," proceedings of the *1998 International Mechanical Engineering Congress and Exposition*, Anaheim, California.
86. Begg, E., Khrustalev, D., and **Faghri, A.**, "Complete Condensation of a Forced Convection Two-Phase Flow in a Miniature Tube," proceedings of the *1998 International Mechanical Engineering Congress and Exposition*, November, 1998, Anaheim, California.
87. **Faghri, A.**, "Advances & Challenges in Micro/Miniature Heat Pipes," proceedings of the *11th International Heat Pipe Conference*, Vol. III, September 12-16, 1999, Musashino, Japan.
88. Zhang, Y., **Faghri, A.**, Buckley, C. W., and Bergman, T. L., "3D Sintering of Two Component Metal Powders with Stationary and Moving Laser Beams," proceedings of the *1999 International Mechanical Engineering Congress and Exposition*, Nashville, Tennessee, HTD-Vol. 364-3, 1999, pp. 211-223
89. Harley, C., and **Faghri, A.**, "Transient Gas-Loaded Rotating Heat Pipes," proceedings of the *15th National and 4th ISHMT/ASME Heat and Mass Transfer Conference*, Pune, India, January 12-14, 2000.
90. Zhang, Y., **Faghri, A.**, and Shafii, M., "Capillary Blocking in Forced Convective Condensation in Horizontal Miniature Channels," proceedings of the *2000 National Heat Transfer Conference*, Pittsburgh, PA.
91. Zhang, Y., and **Faghri, A.**, "Numerical Simulation of Condensation On a Capillary Grooved Structure," proceedings of the *2000 International Mechanical Engineering Congress and Exposition*, Orlando, Florida, November 5-10, 2000.
92. Tabatabai, A., and **Faghri, A.**, "A New Flow Map and Transition Boundary Accounting for Surface Tension Effects in Two-Phase Flow in Horizontal Miniature Tubes," proceedings of the *2001 National Heat Transfer Conference*, Anaheim, CA.

93. Shafii, M. B., **Faghri, A.**, and Zhang, Y., "Thermal Modeling of Unlooped and Looped Pulsating Heat Pipes," proceedings of the *2001 International Mechanical Engineering Congress and Exhibition*, New York City, NY, November 11-16, 2001.
94. Zhang, Y., and **Faghri, A.**, "Oscillatory Flow in Pulsating Heat Pipes with Arbitrary Number of Turns," proceedings of the *8th Joint AIAA/ASME Thermophysics and Heat Transfer Conference*, St. Louis, MO., AIAA 2002-2766, June 24-27, 2002.
95. Begg, E., Holley, B., and **Faghri, A.**, "Experimental Investigation of Heat Transfer and Pressure Drop During Complete Condensation of Water in Miniature Tubes," proceedings of the *12th International Heat Transfer Conference*, Grenoble, France, August 18-23, 2002.
96. Ozar, B., Cetegen, B. M., and **Faghri A.**, "Experiments on Heat Transfer in a Thin Liquid Film Flowing over a Rotating Disk," proceedings of the *2003 ASME Summer Heat Transfer Conference*, Las Vegas, Nevada, July 20-23, 2003.
97. Holley, B., and **Faghri, A.**, "Permeability and Effective Pore Radius Measurements for Heat Pipe and Fuel Cell Applications," Proceedings of *2004 ASME International Mechanical Engineering Congress and RD&D Expo*, Anaheim, CA, November 13-19, 2004.
98. Holley, B., and **Faghri, A.**, "Pulsating Heat Pipe with Capillary Wick and Varying Channel Diameter," proceedings of *2004 ASME International Mechanical Engineering Congress and RD&D Expo*, Anaheim, CA, November 13-19, 2004.
99. Rice, J., and **Faghri, A.**, "A New Computational Method for Free Surface Problems," Proceedings of the *2005 Heat Transfer Conference*, San Francisco, CA, July 17-25, 2005
100. Rice, J., **Faghri, A.**, and Cetegen, B., "Analysis of a Free Surface Film from a Controlled Liquid Impinging Jet over a Rotating Disk Including Conjugate Effects; With and Without Evaporation," Proceedings of the *2005 Heat Transfer Conference*, San Francisco, CA, July 17-25, 2005.
101. Rice, J. and **Faghri, A.**, "A New Computational Method to Track a Liquid/Vapor Interface with Mass Transfer, Demonstrated on the Concentration Driven Evaporation from a Capillary Tube and the Marangoni Effect," Proceedings of *IMECE2005 2005 ASME International Mechanical Engineering Congress and Exposition*, Orlando, FL, November 5-11, 2005.
102. Rice J and **Faghri, A.**, "Analysis of Porous Wick Heat Pipes, Including Capillary Dry-Out Limitations," Proceedings of *IMECE2005 2005 ASME International Mechanical Engineering Congress and Exposition*, Orlando, FL, November 5-11, 2005.